S. HRG. 99-1042

NOMINATIONS—SEPTEMBER–OCTOBER

HEARINGS

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

SEPTEMBER 11, 1986

JOHN W. MELCHNER, TO BE INSPECTOR GENERAL, DEPARTMENT OF TRANSPORTATION; AND WILLIAM R. GRAHAM, TO BE DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY POLICY

SEPTEMBER 17, 1986

SONIA LANDAU AND R. KENNETH TOWERY, TO BE MEMBERS OF THE BOARD OF DIRECTORS, CORPORATION FOR PUBLIC BROADCASTING

SEPTEMBER 22, 1986

DALE E. MYERS, TO BE DEPUTY ADMINISTRATOR, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

OCTOBER 2, 1986

DANIEL BRENNER, TO BE A MEMBER OF THE BOARD OF DIRECTORS, CORPORATION FOR PUBLIC BROADCASTING

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CONTENTS

CHRONOLOGICAL LIST OF WITNESSES

SEPTEMBER 11, 1986

	Page
Opening statement by Senator Gorton	1
Melchner, John W	2
Biographical sketch	1
Prehearing questions of the majority and the answers	4
Prehearing questions of Senator Hollings and the answers	7

SEPTEMBER 11, 1986

Opening statement by Senator Gorton	9
Graham, William R	12
Biographical sketch	12
Prehearing questions of Senator Hollings and the answers	25
Posthearing questions of Senator Gore and the answers	34
Wilson, Hon. Pete, U.S. Senator from California, statement	10
Prepared statement	11

SEPTEMBER 17, 1986

Opening statement by Senator Goldwater	35
Opening statement by Senator Pressler	36
Opening statement by Senator Long	40
Landau, Sonia	38
Biographical sketch	38
Questions of Senator Hollings and the answers	48
Broyhill, Hon. James T., U.S. Senator from North Carolina, statement	37
Mankiewicz, Frank F., executive vice president, Gray and Co	39
Towery, R. Kenneth	44
Biographical sketch	43
Gramm, Hon. Phil, U.S. Senator from Texas, statement	37

SEPTEMBER 22, 1986

Opening statement by Senator Gorton	55
Opening statement by Senator Riegle	57
Opening statement by Senator Hollings	58
Myers, Dale D	59
Biographical sketch	59
Prehearing questions of Senator Gorton and the answers	76
Posthearing questions of Senator Riegle and the answers	81
Wilson, Hon. Pete, U.S. Senator from California, statement	56

OCTOBER 2, 1986

Opening statement by Senator Goldwater	83
Brenner, Daniel	85
Biographical sketch	84
Questions of Senator Hollings and the answers	89
Cranston, Hon. Alan, U.S. Senator from California, prepared statement	84

JOHN W. MELCHNER, TO BE INSPECTOR GENERAL, DEPARTMENT OF TRANSPORTATION

THURSDAY, SEPTEMBER 11, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 10:32 a.m., in room SR-253, Russell Senate Office Building, Hon. Slade Gorton presiding.

Staff members assigned to this hearing: Macky Ayers and Mark Farrell, professional staff members, and David St. John, minority professional staff member.

OPENING STATEMENT BY SENATOR GORTON

Senator GORTON. This meeting of the Committee on Commerce, Science and Transportation will come to order.

It is a pleasure to welcome John W. Melchner to this morning's hearing. Mr. Melchner has been nominated for the office of Inspector General of the Department of Transportation. Currently he is the Assistant Inspector General for Auditing at the Department of Defense where he received the Paul R. Boucher Annual Public Service Award from the President last year for his exceptional performance in fighting fraud and waste in the Federal Government.

Mr. Melchner has also received the Distinguished Federal Executive Award and the Secretary of Defense Meritorious Civilian Service Medal and has an extensive background in auditing.

Do you, Mr. Melchner, have an opening statement?

[The biographical sketch follows:]

BIOGRAPHICAL SKETCH OF JOHN WILLIAM MELCHNER

Address: 1686 Anne Court Annapolis, MD 21401; 400 Army-Navy Drive, rm 1010, Arlington, VA 22202.

Position to which nominated: Inspector General, Department of Transportation.

Date of nomination: July 30, 1986.

Date of birth: July 30, 1938.

Place of birth: New York City, NY.

Marital status: Married.

Full name of spouse: Carol Jeanette Melchner.

Names and ages of children: None.

Education: Manhattan College, Riverdale, NY, 9/56-6/61; BBA, 6/61. University of Dayton, Dayton OH, 1/67; 6/68; MBA, 6/68.

Employment record: From 8/61 to 1/63, United States Air Force Auditor General, Stead AFB, Reno, NV. Lieutenant (Auditing).

From 1/63 to 9/65 United States Air Force General, Tachikawa AFB, Japan, Lieutenant (Auditing).

From 11/65 to 2/66, Arthur Young & Co., 277 Park Avenue, New York, NY, Auditing.

From 2/66 to 9/68, United States Air Force Auditor General, Wright-Patterson, AFB, OH, Auditing.

From 9/68 to 10/69, United States Air Force Auditor General, Andrews AFB, MD, Auditing.

From 10/69 to 9/73, Off Sec Defense, Dep. Asst. Secretary (Auditing), Pentagon, Arlington, VA, Auditing.

From 9/73 to 6/81, Off Sec Defense, Dep. Asst. Secretary (Program/Budget) Pentagon, Arlington, VA, Budgeting.

Government experience: From 1966 to 1968, I served as Treasurer for the Fairbon/Bath Township Welfare Association, Greene County, OH. This was a volunteer position and all of the Association's income (about $2,000 per year) and expenses were for charitable purposes.

STATEMENT OF JOHN W. MELCHNER

Mr. MELCHNER. Senator, I do not have an opening statement but I would like to say a few words.

The Inspector General position in a large Federal agency such as the Department of Transportation is a very important and challenging one. I am honored by the confidence that the President and the Secretary of Transportation have shown in nominating me for this position.

I believe that I understand all of the responsibilities of an Inspector General and I believe I am capable of fulfilling them.

I look forward to answering any questions that you may have.

Senator GORTON. I do have some questions.

A common criticism of spending reforms is that they often burden the honest contractor with even more rules and paperwork.

What can be done to prevent the fraudulent use of governnment funds while, on the other hand, not unnecessarily burdening honest firms with more rules and, of course, the people of the country with higher costs.

Mr. MELCHNER. It is a very difficult question, to answer precisely because it requires a balance between extensive oversight and lack of oversight. What we have tried to do is make sure that our internal control systems and the procedures that are designed to prevent fraudulent activity are the ones that we spend the most time on.

These tend to be internal to the Department and do not place a burden on contractors. They require our quality assurance people to spend a good deal of time looking to see that we get what we pay for. They require our price analysts and our contract auditors to do a good job of looking at proposals in advance to make sure the prices we pay are fair and reasonable.

We try on the government side to do as much prevention as we can and we try to put the control systems in place to assure that we do not get ourselves into a situation where we are vulnerable to fraud or waste.

Senator GORTON. A recent General Accounting Office report found that all three of the Department of Transportation projects it studied experienced cost growth from the initial estimates it provided Congress.

How can we do a better job of ensuring that we have accurate cost estimates at the time at which we authorize or appropriate for projects?

Mr. MELCHNER. I think it is a matter of assuring we have experienced and independent people providing those estimates. There is a temptation on the part of the project office to underestimate the cost of the project. It makes it more palatable to the process that has to approve it. It is a requirement of an estimating system to have independent checks and balances in it, independent cost estimates compared to project office cost estimates, and a review procedure to make sure that they are realistic estimates.

The tendency is to estimate low and the tendency is for projects to come in higher than estimated—it's just the optimism that is built into the estimates that are provided by the proponents of the system.

What we can hope to do is to minimize that optimism and to provide a realistic estimate by assuring the independent checks and balances are there.

Senator GORTON. Based on your experience at the Department of Defense, what procedures should be implemented so that the Department of Transportation can realize the benefits from advanced technology like the national aerospace plan and yet, at the same time, spend its money wisely and well?

Mr. MELCHNER. The project management concept for managing a very large or major acquisition seems to work best. With that concept, you have a dedicated staff of people who are committed, both organizationally and in the management sense, to get a particular job done. We find that has served the Department of Defense extremely well. The same group of people stay with a program from its initial conception as an idea until it is delivered.

I think that has the best chance of assuring a successful program.

Senator GORTON. Is that the best way to see to it that we can have adequate testing of an advanced system, but not slow the process down so much that it is obsolete by the time we give it a green light?

Mr. MELCHNER. The testing issue is one that the project manager struggles with on a regular basis. What I have found in Defense works the best is to have a carefully laid out testing plan before you get to the point in the process where you need to do the testing. Then stick with that plan.

The reason that testing sometimes goes awry is that the project starts to get behind schedule. Then people want to take shortcuts and not do all the testing that they initially said they needed to do. They do not want to use a prototype system because its shortcomings may appear and delay further approvals. They do not want to use a production model if they are going into production testing because that may show the project is really not ready for production. They always want to take a shortcut when the project runs into trouble.

If you look back at what testing was planned in the first place, you find that if that plan had been followed to the letter and in spirit, then the testing would have been adequate. The temptation always—and it is succumbed to far too often—is to skip ahead and cut back on some of the testing.

Senator GORTON. Mr. Melchner, thank you very much. You come with fine qualifications for this position. Those are all the questions we have, and your part of this hearing is adjourned.

[Whereupon, at 10:38 a.m. the hearing was adjourned.]

[The following information was subsequently received for the record:]

PREHEARING QUESTIONS OF THE MAJORITY AND THE ANSWERS

Question. Could you briefly summarize your previous experience at the Department of Defense in auditing various programs starting with your most recent position?

Answer. From April 1984 to the present, I have been the Assistant Inspector General for Auditing in the Office of the Inspector General, Department of Defense. In that capacity I was responsible for the Inspector General's 500 plus audit staff in reviewing major Defense programs and activities. As an original member of the newly created Inspector General, Department of Defense office, I was a principal participant in its organization. This gave me the opportunity to develop a detailed knowledge of all of the requirements of the Inspector General Act with the practical experience of implementing them. In working with the other statutory Inspector Generals in trying to understand what worked and what did not work, I developed a broad understanding of the entire Inspector General community.

From June 1981 to April 1984 I was the Director of the Defense Audit Service and the Deputy Assistant to the Secretary of Defense (Audit). The Defense Audit Services was the predecessor to the Assistant Inspector General for Auditing. It was transferred to the Office of the Inspector General. Its scope of responsibilities remained about the same, except for a significant emphasis on detecting and reporting fraud, and closer working relationships with the criminal investigators. As the Director, I was responsible for completing audits throughout the Department of Defense. I planned and conducted inter-Service audits involving the Army, Navy and Air Force as well as audits of the Office of the Secretary, the Joint Chiefs of Staff, the Unified Commands and the Defense Agencies such as the National Security Agency and the Defense Nuclear Agency. Additionally, I performed complete audits of procurements and acquisitions, involving both the performance of Defense contractors as well as Government activities.

From October 1973 to June 1981 I worked in programming and budgeting in the Comptroller's office on the staff of the Secretary of Defense. I had responsibilities involving budget formulation and execution, including presentation of the budget to the Congress and the related reprogramming process. This experience gave me the knowledge and insight of how the financial management of a large Federal organization operates.

From August 1961 to October 1973, I served in audit positions as both an Air Force officer and a civil servant. My experience began at a small Air Force base in Nevada and, by October 1973, I was performing audits of major weapon system programs and the procurement process at the direction of the Office of the Secretary of Defense. I worked at most of the major installations in the Department of Defense, both in the continental United States and overseas.

Question. How does your experience at the Department of Defense qualify you for the position of Inspector General at the Department of Transportation?

Answer. Senator, I would like to answer that question in two parts. First, I believe I am qualified to be an Inspector General because of my duties over the past several years as well as my extensive auditing background. I understand the Inspector General legislation and Inspector General operations. In addition to leading the auditing arm of the DOD Inspector General's Office, I have worked closely with the criminal investigators, especially in the area of white collar crime. I am fully aware of all of the responsibilities of an Inspector General.

Secondly, I believe I can be an effective Inspector General at the Department of Transportation because of my experience in the Department of Defense. The Department of Transportation is one of the major Departments in the Federal Government. It has many large and complex programs and activities which require Inspector General examination and oversight. I have demonstrated I am up to this kind of job at Defense and I am confident I could do the job at the Department of Transportation.

Question. In what ways do you believe your responsibilities at the Department of Defense will be similar to the responsibilities of an Inspector General at the Department of Transportation? How will they differ?

Answer. My responsibilities and that of the Inspector General at the Department of Defense are in most ways similar to the responsibilities of the Inspector General at the Department of Transportation. Both provide policy direction and supervision for audits and investigations pertaining to the Department. Both review existing and proposed legislation and regulations and make recommendations regarding their impact on the economy and efficiency of Agency operations and the impact on the prevention and detection of fraud and abuse in Agency programs and operations. Both are activists in the Agency in promoting economy and efficiency and in preventing and detecting fraud and abuse. Both work with other Government agencies and non-Government entities to promote economy and efficiency in Agency operations and prevent and detect fraud, including identification and prosecution of participants in fraud or abuse. Both keep the Agency head and the Congress informed of fraud, other serious problems, abuses, and deficiencies in the administration of Agency programs, and the corrective action needed as well as progress in implementing such corrective action.

Even though the responsibilities are fundamentally the same, I expect some differences. The principal difference that I can visualize is that at the Department of Transportation there will be far more significant involvement with State and local Governments. Also, the oversight of the administration of grants is an area in which the Department of Defense has little activity and which is a major one at the Department of Transportation.

I do not expect that these differences would present significant problems to my effectiveness as Inspector General.

Question. What are your priorities as to goals and improvements you would like to implement as Inspector General of the Department of Transportation?

Answer. As an Inspector General new to any organization, there are two things that would be my primary initial concerns. My first priority would be to assure that the audit and investigative resource of the Inspector General are deployed to prevent fraud, waste and inefficiency in the management of the Department's programs.

The second priority would be to assure the followup and resolution system is working effectively. It does little good for the Inspector General to make recommendations for change, secure management's agreement that the change is necessary and can be implemented, only to find out nothing is done. An active followup and resolution system is a must.

Turning to the Department of Transportation where I do not yet have expert knowledge, I understand that the Federal Aviation Administration (FAA) has under way a major developmental and procurement program to modernize the National Airspace System. I am told the upgrade is projected to cost over $10 billion over the next 20 years. This procurement would get my attention because I want to be sure that the Inspector General has a program of audits and investigations that assures the procurement and contract administration practices of the FAA are in excellent shape. The goal here is to anticipate where the problems might come up and then get out in front to prevent them. In general I would aim to assure that all the major programs, as measured in dollars or of other significance, are fully covered.

Question. How would you characterize Secretary Dole's reception to your ideas and what type of support did she offer for future Inspector General activities?

Answers. Secretary Dole was very receptive to the idea of assuring the audit and investigative resources are applied in anticipation of problems and that the programs and activities of the Department that expend the most resources and are the most vulnerable receive adequate Inspector General oversight. The Secretary assured me of her full support for all Inspector General activities and was especially complimentary of the success of the Inspector General's criminal investigators in detecting and preventing bid rigging in Department of Transportation funded construction programs.

I know from my experiences in the Department of Defense, where the Inspector General received outstanding support from Secretary Weinberger, that the support of the Secretary is vital to the success of the Inspector General's activities. I am confident from my discussion with Secretary Dole that she also enthusiastically and unqualifiably supports her Inspector General.

Question. Are current Inspector General procedures adequate to ensure the overall effectiveness of the Department of Transportation and the Department's commitment to safety?

Answer. Senator, that is a difficult question for me to answer at this point. I would hope that they are, and I have no reason to think they are not. If confirmed, one of my first priorities would be to assess how thoroughly the Department of

Transportation's programs are being evaluated by the Inspector General, including the programs designed to carry out the Department's commitment to safety.

Question. What can the Inspector General's office do to ensure better management of Department of Transportation contracts?

Answer. A good program of audits of the management of the procurement process, including the administration of contracts after they are awarded, will point out weaknesses in the current process. Sound recommendations for improvement plus aggressive followup to assure they are implemented should complete the loop. The fact that a particular area or function is targeted for Inspector General examination has a deterrent effect. When the managers know an Inspector General is coming in, they put in the extra effort to make sure things are done right.

The contractors dealing with the Department of Transportation need to be aware that they are not outside the Inspector General's purview. They need to get the message that the Department will not agree to unfair or unreasonable prices, and will not accept shoddy or poor quality products. They should view the Department of Transportation as a tough, but fair, customer.

Overall, the Inspector General's organization needs to keep the pressure on the procurement managers to move in the direction of buying only what is needed, paying a fair and reasonable price for it, and getting what is paid for.

Question. How would you improve the internal auditing of Department of Transportation programs when there is a reluctance on the part of program managers to report the mismanagement or abuse of funds?

Answer. Encouraging disclosures of mismanagement or abuse can be done in several ways. First, and this particularly pertains to fraud and abuse, is to protect the anonymity of the person making the disclosure. In the Department of Defense, we do this through our Hotline Program. Many of the disclosures we receive do not come directly into the Hotline but we process them through the Hotline control procedures because there are mechanisms there to protect the source of the allegation.

Secondly, and I think more to the point of your question, is the attitude of the internal audit staff when managers come forward and disclose a problem as part of a search for help in correcting it. I believe, and it has been my practice as an internal auditor, to treat such disclosures as a hallmark of a good program manager. When a program manager recognizes there is a problem and seeks audit help in correcting it, the audit must reflect that. The auditors cannot play "gotcha" here. The resulting audit report must clearly give credit to the program manager for disclosing the mismanagement or abuse of funds and the program manager's role in working toward prompt corrective action. I believe this improves the usefulness of the internal auditors and provides quality internal audit service to managers.

Finally, I believe an Inspector General must be accurate, honest, balanced and fair. When an Inspector General achieves a reputation for these characteristics, managers become more cooperative.

Question. An August 3, 1986 Washington Post article (enclosed) basically claims that the Federal Aviation Administration (FAA) purchased a computer before making sure it works. Do you agree with the FAA procurement decision? What actions could the Inspector General take to avoid similar occurrences in the future? How are agencies, like the FAA, to procure sophisticated equipment which cannot be tested until the production phase, if procurement procedure require the effectiveness of the equipment to be demonstrated before it is purchased?

Answer. I recall the article, Senator, however, I do not have enough information to make a judgment. As you recognize from your question, there are hard decisions to be made as to how much testing is done to assure the equipment works before it is procured, especially when there is an urgent need to field the equipment and an equally urgent need to assure it works perfectly once it is in the field. From an Inspector General perspective, I believe all the rules and regulations on how to properly manage the acquisition of a major system are out there. The key is to go through all the required steps. There needs to be a test and evaluation master plan that shows the amount of developmental testing that needs to be done as well as the amount of operational testing needed before the system is approved for production. The procedures on how to do it right are available, and many of them are based on lessons learned from things that went wrong on earlier procurements. The key is to prepare a credible plan and stick to it.

Question. How would the proposed budget cuts affect the work of the Inspector General's office?

Answer. Asssuming the Inspector General staff is appropriately sized now, any budget reduction would impact the ongoing work of the Inspector General. The severity of the impact would depend upon the specific audits or investigations that would be delayed or deferred. I understand that the pressures to reduce the Federal

budget and the deficit are very great, and the Office of the Inspector General must do its part in holding its costs down.

PREHEARING QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS

Question. How has your work experience qualified you to hold the position for which you have been nominated? Why do you want this job?

Answer. I have 25 years of auditing and financial management experience in the Department of Defense. My work has been at all levels in the Department and I am very aware of the complexities involved in managing a major Federal agency. For the past 5 years, I have led the auditing arm of the Defense Inspector General's office, and its predecessor organization. When the Inspector General Act was amended in September 1982 to include the Department of Defense, I was part of the team that put the organization in place. I am very familiar with all of the responsibilities of an Inspector General. I have worked very closely with our criminal investigators on cases they are pursuing as well as on specific referrals my auditors have made to them. In summary, I believe all of my experience, particularly that of the past 5 years has qualified me to be an Inspector General. I believe I can be effective at the Department of Transportation because many of the programs and functions there are similar to those in the Department of Defense.

Question. What changes do you expect to bring to the Department of Transportation's Office of Inspector General? What, if any, improvements will have to be made in the Office's review procedures?

Answer. Senator, I think it would be premature at this point for me to discuss whether any changes are needed. I am sure however, that I am going to be asking a lot of questions about how the Office of the Inspector General operates, including its review procedures. My primary interest is whether the audit and investigative resources are being deployed to cover the areas where the Department is most vulnerable to fraud and waste. I want to be sure that the program of audits and investigations is geared to where the Department's reasources are flowing. I want to be sure that the Inspector General's work is planned so that we can get out in front of the managers to check on procedures and controls so that we prevent problems to the maximum extent we can. If this is all being done now, and being done well, I would foresee any changes as minimal. If not, I will make the necessary changes.

Question. Are there any specific programs or agencies within the Department of Transportation which you believe require more careful examination by the Office of the Inspector General than has been given in the past? If so, which ones?

Answer. First of all, I want to assure you that no program or agency would be excluded from examination. While I am not familiar with the specific programs or agencies that have been examined in the past, one of my first priorities will be to understand which programs and activities have been examined, and whether any major or vulnerable ones have been missed.

In fact, I believe a good reason for at least a quick survey in an area is lack of a recent Inspector General examination. If the quick survey shows the program or agency is operating satisfactorily, and there are no other indications to the contrary, then no further examination is in order. The overall objective is to make sure the audit and investigative resources are covering the programs and agencies where the need to protect against fraud and waste is the greatest.

Question. How important to the auditing process is the cooperation of the individual program managers? What methods or practices will you use to encourage a maximum level of cooperation from them?

Answer. The cooperation of the individual program managers is vital to a successful audit. An audit can proceed without the cooperation of the program manager. There is no question about that. Furthermore, no amount of cooperation should ever diminish the independence of the auditor. However, the measure of a successful audit is the change it brings about and the savings and efficiencies that result from it. Here the program manager's cooperation is vital. Once the audit findings are developed, the best recommendations for change come from a collaborative effort between the auditors and the managers responsible for making the change. A program manager who wants to achieve the savings or efficiencies identified by the auditors can really be effective and move out smartly to get the job done. I have found that the audit satff gets the most cooperation from the managers if the managers are kept fully informed of the auditors' objectives and the findings as they are being developed. No one likes surprises. Keeping the managers informed gives the auditors the benefits of management's thinking as the findings develop so that they have all the factual answers when the recommendations for change are made.

Clearly, this practice will not result in a perfect record of management concurring with 100 percent of the auditors' findings. It is inevitable that there will be disputes and these will have to be carried through a resolution process. However, even this process is facilitated by a cooperative spirit between the auditors and the managers in finding the correct solution.

WILLIAM R. GRAHAM, TO BE DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY POLICY

THURSDAY, SEPTEMBER 11, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 10:39 a.m., in room SR-253, Russell Senate Office Building, Hon. Slade Gorton presiding.

Staff members assigned to this hearing: Macky Ayers, professional staff member; Cassie Phillips, staff counsel; and Pat Windham, minority professional staff member.

OPENING STATEMENT BY SENATOR GORTON

Senator GORTON. We will now convene the nomination hearing of Dr. William R. Graham. Dr. Graham, if you will come forward.

Bill, we welcome you here in a new guise, having become well known to you and you to us in your fine service at NASA. This, of course, is the hearing on your nomination to be Director of the Office of Science and Technology Policy which goes along with your designation as the President's Science Advisor.

Congress created the Office of Science and Technology Policy in 1976 because it recognized the importance science and technology play in the welfare of our nation. Our economy, our health, our environment and our national defense all depend on our strong base in science and technology.

Congress created OSTP as a central science policy office in the Executive Branch to help other Federal agencies identify science policy issues, to mobilize our vast scientific and technological resources, to fund programs and to anticipate future problems.

Most importantly, the Office is to make a systematic review of Federal science policy and programs and to recommend legislation as needed. Nowhere else in the Federal Government, including the Congress, is there an office with a broad perspective on as important an area as science and technology policy.

Seldom do we have the opportunity to take the long-range view. We rely on you to step back from the parochial concerns of individual agencies and the crush of immediate problems for guidance in science and technology policy.

The 1976 legislation also anticipated the need for an advisory mechanism within the Executive Office of the President so that the

President could get independent expert advice on the often complex problems of science and technology.

I welcome your nomination to this post. You have a strong background in science and technology as an engineer and a physicist. You have had a distinguished career in both the public and private sector, most recently as Deputy Administrator of NASA.

Dr. Graham, I certainly hope that your tenure at OSTP is more peaceful than that at NASA, but we are delighted to have you here today.

Senator Wilson has asked for an opportunity to make an introduction.

STATEMENT OF HON. PETE WILSON, U.S. SENATOR FROM CALIFORNIA

Senator WILSON. Thank you. I only wish it could have in time, Mr. Chairman, but I appreciate the need to move smartly, and I respect the way in which this committee conducts its business. I was regrettably detained introducing yet another distinguished Californian to the Armed Services Committee, the new nominee for Under Secretary of Defense for Acquisition.

Mr. Chairman, in the interest of your time I will submit the statement for the record. If I might, though, I would like to make one or two personal observations. As the Chair well knows, the nominee this morning, Dr. Graham, comes to the committee with, I think, impeccable credentials but beyond the normal recitation of his experience, his academic preparation, the distinctions that he has won, I think the particularly relevant part of his curriculum vitae is the most recent.

He had been, as I understand it, or as I recall, for 11 days in his job as both Deputy and Acting Administrator at NASA when he was called upon to lead that agency through what has clearly been its most trying period.

I think he did so with distinction. It was a time in which less wise and less cool heads were, I think with whatever motivation, taking steps that, however they may have been motivated, really risked some great harm to an important agency. I think that his tenure there was one in which there was cooperation with the investigation by the President's Commission and an effort to, even under those very trying circumstances, to restore morale and to bring forward the work of that agency.

I would only say that I think that that has demonstrated his mettle and as to the rest of a very distinguished curriculum vitae, I think that it is clear that he has had both the academic and real world experience that will serve him admirably or, more accurately, serve the President admirably as he goes to the post of the President's Science Advisor.

That is of enormous importance, as the Chair knows. And it is because of the varied experience that he has had as an active officer in the Air Force, his years at RAND, the distinction that he has won in conducting original research and engineering in areas that support the survivability of our strategic forces, the ability that he has demonstrated to predict nuclear phenomena and his design of experiments, all of these things I think indicate his readi-

ness and his high competence to perform this enormously important task.

So, with that, I will submit that statement for the record but I do not wish to take more of your time. I do wish that the record reflect my very high personal endorsement and high confidence in Dr. Graham.

Senator GORTON. In addition to your oral statement, your written statement will be made a permanent part of the record.

Pete, thanks for being here. If you would like to stay for the questions, you are perfectly welcome to, but if you have other things to do I totally understand.

Senator WILSON. Unhappily, I do and I will be unable to add to the committee's deliberations here, so I will not impede them.

Thank you very much, Mr. Chairman.

[The statement and biographical sketch follows:]

STATEMENT OF HON. PETE WILSON, U.S. SENATOR FROM CALIFORNIA

Thank you Mr. Chairman, it gives me great pleasure to once again come before this committee to present the credentials of an individual that I believe offers this nation the best of the best. Dr. William R. Graham is well known to us here today. Just under a year ago, I came before you to introduce Dr. Graham as the candidate to fill the position of Deputy Administrator of NASA, and today I am pleased to present for this committee's consideration Dr. Graham for the position of Director for the Office of Science and Technology Policy within the Executive Office of the President.

For the past year, Dr. Graham has been the Deputy Administrator of the National Aeronautics and Space Administration. Six of those months he served as the Acting Administrator during what no doubt has been that agency's most trying time. In fact, when Dr. Graham became the Acting Administratror of NASA he had only been with the agency for 11 days when he was called upon to serve as both Deputy Administrator and as Acting Administrator. While serving as the Acting Administrator, Dr. Graham and the world witnessed what many will agree was one of this nations' great tragedies. But as Congress, the nation, and the world watched, Dr. Graham proceeded to lead NASA on a steady, forward moving course while many were trying to create controversy and division. At the same time, he also assured NASA's close cooperation with the President's Commission in investigating the cause of the Challenger accident.

As you know, before Dr. Graham's tenure with NASA he served as the Chairman of the President's General Advisory Committee on Arms Control and Disarmament. He was a founder and executive of R&D Associates, an advanced technology corporation working in the areas of national security, energy, communications, electronics and related technologies. Dr. Graham has conducted a great deal of original research and engineering in areas that support the survivability of our strategic forces, and has predicted nuclear phenomena and designed experiments that tested and confirmed these predictions. While much of that work is necessarily classified, his technical competence is highly regarded by his peers.

Dr. Graham has also spent 6 years with the Rand Corporation as a member of their technical staff; and 3 years as an active duty officr at the Air Force Weapons Laboratory in Alberquerque, New Mexico.

With both a Doctor of Philosophy in electrical engineering and a Master of Science in Engineering Science from Stanford University, and Dr. Graham's Bachelor of Science in Physics with honors from the California Institute of Technology, Dr. Graham comes to this committee and this position with some of the highest educational qualifications this country has to offer.

His educational background, knowledge of science, managerial experience, and overall understanding of our nation's scientific and engineering challenges will enable him to provide the necessary leadership and advice on those scientific and technical issues which are today at the forefront or our nation's interest and those which will arise in the years to come.

In the most basic of terms, Dr. Graham is a man of distinction, high moral character and significant achievement; the President could not have nominated a more capable candidate to be his Science Advisor and the Director of the Office of Science and Technology Policy.

I am deeply gratified to present to this committee Dr. William R. Graham, and know that you will act on this important nomination.

BIOGRAPHICAL SKETCH OF WILLIAM ROBERT GRAHAM

Address: 7517 Royal Oak Drive, McLean, Virginia 22102; Deputy Administrator, National Aeronautics and Space Administration, Washington, D.C. 20546.

Position to which nominated: Science Advisor to the President and Director, Office of Science & Technology Policy.

Date of nomination: June 3, 1986.

Date of birth: June 15, 1937.

Place of birth: San Antonio, Texas.

Marital status: Married.

Full name of spouse: Nina Harrison Winter Graham.

Names and ages of children: Ian Robert Graham, 20; Elizabeth Holley Graham, 15.

Education: Stanford University, 1959–1963, Doctor of Philosophy in Electrical Engineering, 1963, 1959–1963 Master of Science in Electrical Engineering, 1961; California Institute of Technology, 1955–1959; Bachelor of Science in Physics (with Honors), 1959.

Employment record: From 1982 to present: Chairman, President's General Advisory Committee on Arms Control and Disarmament.

1975 to present: Member, Defense Nuclear Agency, Scientific Advisory Group on Effects; Consultant, Defense Nuclear Agency.

1964 to 1971: Consultant, United States-United Kingdom Joint Working Group on Atomic Weapons.

1970 to 1981: Consultant, Office of the Secretary of Defense.

1970 to 1981: Member, Defense Science Board System; Vulnerability Task Force and Associated Task Forces.

1980: Member, Department of Defense Transition Team, Office of President-Elect Ronald Reagan.

1974 to 1975: Member, Air Force Science Advisory Board Task Force on Manned Strategic System Vulnerability.

1970 to 1971: Consultant, National Academy of Science/National Research Council, Committee on Undersea Warfare.

Military service: 1959 to 1965; Commissioned: Second Lieutenant, U.S. Air Force, 1959. Promoted: First Lieutenant, 1962. Active Duty: Air Force Weapons Laboratory Albuquerque, New Mexico, September 1962 through May 1965.

Government experience: 1985 to present, Deputy Administrator and Acting Administrator (12/5/85 to 5/12/86), National Aeronautics & Space Administration.

1982–1985, Chairman, President's General Advisory Committee on Arms Control and Disarmament.

1975 to 1985, Consultant, Defense Nuclear Agency.

STATEMENT OF WILLIAM R. GRAHAM

Dr. GRAHAM. Thank you very much, Mr. Chairman.

It is my privilege to appear today as the President's nominee for the Director of the Office of Science and Technology Policy. Undertaking such an assignment, should I be confirmed, would be a challenge at any time, but it is perhaps more so today than at any other time in the history of the Office. Science and technology are more than ever recognized as vital elements in the future of all advanced and developing nations and even more so for the United States, the leader of the nations of the free world.

We as a nation must continue to do all we can to advance those areas of science and technology that contribute to the national security of the United States, to the health and economic well being of our people, and to our long tradition of leadership in science and technology.

One of the challenges we face is the matter of priorities in an era of large Federal deficits and tightly constrained Federal budgets. We must necessarily decide these priorities among the multitude of

possible research and development areas: which ones to initiate, encourage, and support and which ones to terminate or redirect in channels more in keeping with effective use of the nation's capabilities and resources.

Another challenge is in cooperation and competition with our allies around the world. We want their economies to be strong and healthy. We want them to contribute effectively to the national security of their own countries and to the security of the western alliance and to the regional alliances generally which are the cornerstone of our own foreign policy.

At the same time, our friends and allies compete with our own economy for markets and for supplies. Therefore, as a nation we must strive to keep our scientific and technical capabilities highly competitive in a very demanding worldwide economic arena.

The themes of competition and cooperation are also present in our relations with ideological opponents and potential adversaries. Here, scientific cooperation has the potential for building bridges and for building confidence in working together. To realize that potential, such cooperation must be founded upon the elements of reciprocity, mutual scientific contribution, and mutual scientific benefits, while avoiding the transfer of technology that would adversely affect our national security.

When one reads the legislative charter of the Office of Science and Technology Policy, further challenges become readily apparent. The Act recognizes that in many areas advances in scientific understanding and the application of appropriate technologies may hold the key to resolving important problems of our complex and diverse nation. We must cope with problems in areas such as energy, the environment and natural resources.

In biology, new challenges abound in separate and interacting contexts: in the intrinsic nature of information storage and use in living matter, which already is leading to a better understanding of genetically inherited diseases; in the vulnerability of the human immune system to AIDS, against which biomedical scientists are urgently seeking understanding and remedy; and in the troubling potential exploitation of evolving biological technology for military purposes.

One common denominator in all of these and other areas is the need for further fundamental understanding; the product of basic scientific research. That research is conducted largely in the colleges and universities of our country; in many fields of research our academic establishment excels while at the same time it performs the equally important task of training the next generation of scholars to carry on the inquiry and productivity of the current generation.

If we are to perpetuate the scientific and technological capabilities of our country, we must continue to show our society at large and, more specifically, our young generation that scientific and technical endeavors are not only vital to the nation's future security and offer tangible rewards, but also that they offer the prospect of true intellectual thrill and accomplishment.

The tasks that face us in science and technology policy are by no means simple, and addressing them will require the counsel of

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many skilled and experienced people from the academic, the industrial and the governmental sectors of our country.

Let me be emphatic on this point. OSTP's basic task is to stimulate and enlist all of the resources of the scientific and technical talent within the academic community, in industrial organizations, in the government, and among private individuals.

Finally, the counsel and support of the members of Congress and their staffs is no less an essential element of our continued national success and prosperity. I pledge close communication and cooperation, should I be confirmed, between the Office of Science and Technology Policy and the Congress.

Mr. Chairman, this ends my prepared statement and I shall be pleased to address any questions you wish.

Senator GORTON. Thank you.

Dr. Graham, the position for which you are nominated is not only that of Science Advisor to the President, but also that of Director of the Office of Technology Policy. Congress created OSTP in 1976 to perform the central science and technology policymaking functions within the Federal Government.

How do you envision OSTP fulfilling this mandate during your tenure?

Dr. GRAHAM. Mr. Chairman, I believe OSTP provides a natural location for the Science Advisor to the President, that job being the most important function of the Director of OSTP. By custom and certainly by the indication of the statute, the Director of OSTP provides direct advice to the President on matters of national policy with regard to science and technology.

Therefore, my direct communications with the President will be one of the major, perhaps the most important, way that I would carry out that function. In being able to provide that advice, I would seek the counsel and wisdom of the many sectors of the scientific and technological community outside the government.

There is no way that an office of any size, particularly the size of one which has to function effectively within the Executive Office, could bring to bear all the expertise from within that is necessary to carry out the job of Science Advisor and Director responsibly.

In the mechanics of the job, of course, the Office of Science and Technology Policy is involved as a senior element of the Executive Office staff in all the decisions that reach Presidential level and, in particular, brings to bear the scientific and technological perspective on those decisions.

In addition, OSTP is involved on a constant basis in the national level budget review and budget prioritization that is done in conjunction with and under the general direction of the Office of Management and Budget for the President. And I would continue that as a very active function.

Finally, OSTP chairs the Federal Coordinating Council for Science, Engineering and Technology, which brings together the multiagency, multidisciplinary aspects of scientific and technological issues. I would anticipate that that Council would continue with an active involvement in multiagency Federal issues.

Senator GORTON. The President has requested a substantial cut in OSTP's budget for fiscal year 1987 from $2.2 million to $1⅔ million.

What effect will this cut have on OSTP's ability to monitor and analyze science and technology programs and what steps will you take to ensure that the Office has an adequate number of experienced staff?

Dr. GRAHAM. As we are all painfully aware, Mr. Chairman, the Federal Government is in an era of vigorous budget control and I believe it is appropriate that, as leaders of the Executive Branch, the members of the Executive Office provide a sense of that discipline and concern in their own budgets. Therefore, I see a reduction in Executive Office budgets and OSTP's budget as in keeping with the general concern of the country and the general need for great care in our budgeting process.

I have not turned my attention to detailed issues of OSTP organization at this point, in deference to the confirmation process. However, if confirmed, the first thing I would do would be to review the organization of the Office very carefully, review the outside assets that the Office can draw on, particularly the technical talent personnel, other professional bodies that are available for consultation and advice, the Academies, the National Science Foundation and many scientific and technical resources the country has beyond OSTP, and look to them for intellectual support and consultation.

I would also attempt to organize and structure the office in such a manner that it was able to run as efficiently as possible and to draw on the support capabilities of other parts of the Executive Office where those will suffice for things now done within OSTP.

Senator GORTON. Numerous recent reports paint a bleak picture of the quality and quantity of education being offered in sciences and engineering in the nation's elementary, secondary, university and postgraduate schools.

Do you believe this to be a serious problem and, if so, what do you think the Federal science and engineering apparatus can do, and what actions are you likely to advise the President to take to improve the situation?

Dr. GRAHAM. I believe it is important that the United States train and encourage, motivate, and help a substantial number of young people to go into science and technology areas. This is in support of our national competitiveness, commercial capabilities, and our ability to provide for the well being of the population and, of course, to support our national security but, equally important, to maintain the deep cultural themes of preeminence in science and technology that have been traditional in this country.

To that end, I believe the Federal Government has a strong responsibility to support basic research and development. Most of that research and development is done within our universities, and the universities can derive and have derived substantial overall support from Federal Government initiatives in the basic research area. That is one way.

Certainly facilities that are provided to universities around the country by Federal research funds is a very closely related way.

In the secondary and elementary schools, I believe we need to continue programs in the Federal Government which provide a source of motivation for those young people, and from personal experience I can testify that the space program is a major source of

initiative and inspiration for our young people. We need to make sure such programs are strongly before them.

The Federal Government can also help by doing research into means of educating people in the science and technology area. Science and technology are rigorous fields to study. They require long and sometimes difficult courses of investigation just to reach the present state of the art which itself is advancing rapidly.

The Federal Government can help, I believe, at the primary, secondary, and certainly the advanced level in developing means to teach people who are interested in science and technology.

So in terms of motivation and then in education and finally in funding facilities and other capabilities, as well as some programs to provide direct support in certain areas, I believe the Federal Government can be very helpful. At the same time we have to recognize that private industry in the U.S. also has a strong interest in having trained and at its access capable technologists, and so we should look to the state, the local and the private sector for substantial support in this area as well.

I would hope OSTP could help coordinate efforts between those organizations.

Senator GORTON. The President's White House Science Council recently issued a major report on the health of U.S. colleges and universities which concludes in part—and I quote: "Universities today simply cannot respond to society's expectation for them to discharge their responsibilities and research in education without substantially increased support." That is the end of the quote.

Is there a major practical source of funding for such an effort other than the Federal Government, and how do you intend to use OSTP to help meet the challenge?

Dr. GRAHAM. Mr. Chairman, the funds that the Federal Government has provided for basic research have increased over 60 percent in the last six years. The President has made Federal support of basic research a major item on his agenda and has made sure that very substantial financial support and increases in financial support have been provided for basic research. Most of that has in fact gone to universities around the country.

That trend will no doubt continue, although we must recognize what a vigorous budget environment we are in.

Other sources of support for universities and for university level education certainly include State organizations, but in addition I think another untapped resoure, relatively untapped resource, is the commercial sector.

Private industry needs the advances in basic research that universities can provide. Once the U.S. was in an era when the universities could go one way and private enterprise could go another and have only the most casual relationship. I think we are past that era now. The world competition is very strong and very good.

Our universities and our commercial entities are going to have to remain in close communication. I believe that there are strong synergistic effects between these two sectors which can help provide for the education and research of our youth within the university structure, while at the same time greatly strengthening our commercial industry and our commercial enterprise.

I would look to them as a continuing and strengthening source of support.

Senator GORTON. You have referred in answer to that question to the increase in support for research. The Packard-Bromley report and other similar studies have been the vehicles for the university community to ask the Federal Government for a facilities fund to help finance new buildings.

What do you personally believe is the Federal responsibility with respect to university building?

Dr. GRAHAM. I believe that the Federal Government does have a responsibility to help provide for facilities for basic research and development. It is virtually impossible to conduct state of the art research and development in most areas without modern equipment and facilities.

At the same time, I believe the Federal Government does not bear that burden alone, I would take as an indication of an institution's interest and abilities to conduct basic research activities the willingness and the capability it has to provide funds from other sectors to go along with Federal funds in the facilities areas.

So I think it is an important Federal responsibility, but it is also an important responsibility of the states and of the private sector to provide for those facilities, and their contribution should be brought together to help the universities.

Senator GORTON. Would your answer be identical with respect to the Packard-Bromley report's recommendations on instrumentation and equipment?

Dr. GRAHAM. Yes. Very much so, Mr. Chairman.

Senator GORTON. The public pays for science and thus a certain amount of research will be conducted in the public interest. At the same time, however, basic research without immediate social value often leads to great discoveries.

What is your view of the proper balance between applied and basic research?

Dr. GRAHAM. I believe that, as I said, basic research is largely a responsibility of the country as a whole, and it is very much in keeping with our culture and traditions that it be done through governmental activities.

Applied research, of course, when it bears directly on the user in the national security area is appropriate for funding from the Department of Defense and related national security organizations of the government.

Applied research which involves our commercial position, our commercial competitiveness, should largely be left to the commercial sector to provide, in my view. I believe that the commercial sector is much more capable of judging those areas which warrant its investment in research, much more capable in judging how to best manage and apply that research to their commercial needs than is the Federal Government.

So I see a partnership here where the Federal Government takes large responsibilities in basic research and then the responsibility transitions to the private sector as we go to much more applied activities.

Senator GORTON. Senator Gore can only be here for a few minutes and he does have some questions, so I will defer to him and then return to mine.

Senator GORE. I appreciate your courtesy, Mr. Chairman.

Welcome, Dr. Graham. This is your second time through this process. I want to welcome you here, and your family and others.

Dr. GRAHAM. Thank you, Senator Gore.

Senator GORE. You have an opportunity to make a tremendous difference, and I hope that you will. I hope that the President gives more attention to science advice than some of us think that he has in the past.

I only have a couple of areas that I would like to pursue with you. The first one involves SDI. Many observers of the U.S. scientific effort come to the conclusion that it is likely to be dominated by SDI at least for the next two years, perhaps for longer than that. And if you look at the overall amount of money spent on research and development by the Federal Government, certainly that is the case.

There is a dispute about what the definition of SDI is, and I do not want to get into that in detail because it is really not directly relevant to your confirmation. But it is in a way, for this reason: Many have charged that the President's program is wildly unrealistic because it is not scientifically feasible.

One of the places to which he will or should turn for advice about scientific feasibility or infeasibility is to his Science Advisor.

Do you believe that it is feasible to create a system of strategic defense that is 99.9 percent effective in stopping nuclear warheads from the Soviet Union? Do you believe that is scientifically feasible at a cost that is less than the cost of countermeasures capable of overcoming such a defense?

Dr. GRAHAM. Senator Gore, I believe that the President has challenged us all to go from an era that we are in today where offensive systems dominate the strategic situation, toward an era in which defensive systems dominate the strategic situation, in which it is safe to reduce the level of offensive forces on both sides without concerns for attendant possible actions that cannot be observed, which would in fact lead to later challenges and threats against one side or the other; in other words, toward a defense-dominated situation that is insensitive to low levels of offensive forces.

I think in terms of that very large picture, we have to address the Strategic Defense Initiative. The history of science is literally rife with the stories and legends of great scientists, men of great eminence, who have predicted things that could not be done. I believe it was predicted that the airplane could not be done, the electric light could not be done, many, many things could not be done.

And if I have learned nothing else in the last 30 years, I have learned to be very cautious about making predictions on things that could not be done.

I do believe that there is a good chance that if we can work with the Soviet Union and persuade them of the advantages of a defensively dominated international strategic situation, that in fact we can reach a level where offensive forces are lowered by the deliberate act of both sides and defensive forces are increased by the delib-

erative act of both sides, which in its final analysis would reduce and eliminate the implications and the effects of today's high level of nuclear forces.

Therefore, in that sense, I believe a defensive system could be put together which is in fact very comprehensive. But it is a long process, it is one which requires a considerable amount of understanding and intention, good intention on both sides, and I see us today as starting that process.

Senator GORE. Well, we could both have an interesting time pursuing that in detail, but I will not pursue it at this point. I appreciate your response.

Now, one of the questions that has arisen within the SDI program is whether or not scientists working on the program should be subjected to a litmus test of belief. Under Secretary of Defense Donald Hicks has said, as reported in Science Magazine, quote: "I am not particularly interested in seeing Department money going to someplace where an individual is outspoken in his objection of Department aims, even for basic research. If they want to get out and use their roles as professors to make statements, that is fine; it is a free country. But freedom works both ways: They are free to keep their mouths shut; I am also free to give them money." He added: "I have a tough time with disloyalty."

Can you openly reject the view expressed by Under Secretary Hicks as you appear before us this morning?

Dr. GRAHAM. Let me give you my view, Senator Gore. I believe that the scientific and technical work that members of the research community conduct should be sponsored on the basis of the merit of the work and the capability of the individual and, finally and not least, the willingness of the individual to perform that work.

I would never ask an individual to perform work to which he was opposed, but at the same time I would support work based on its merit, not based on the statements of the individual doing it.

Senator GORE. Now, let me ask you a hypothetical question. Let us say that the Federal Government is handing out research dollars and an individual who is extremely well qualified to do basic research of a kind proposed for funding has been quoted in the newspaper, expressing a political view about the SDI program that is contrary to the views held by the President or the Secretary of Defense or the Under Secretary of Defense.

Do you think it would be legitimate for the government to deny research funding to this competent and qualified individual on the basis of his or her statements about a political view that happened to differ from that of the administration?

Dr. GRAHAM. No, I do not, Senator Gore. At the same time I would not try to coerce that individual into conducting research in a field that he did not want to pursue.

Senator GORE. That is not the question.

Dr. GRAHAM. I understand.

Senator GORE. That is not the question. I appreciate your response to the question and I hope that Dr. Hicks does, too.

Let me move to the other subject I would like to explore very, very briefly. And there are so many areas that I wish I had time to explore with you, including genetics and the work that your predecessor has done in that area, robotics, and a number of other areas.

But one of the scientific controversies that I personally feel will be moving very quickly to the top of this country's agenda, though it is not there now, is the greenhouse effect. By the end of this century I personally am convinced that it will be the environmental and scientific issue facing the world. Yet, we have devoted very little attention to it so far.

We have a program ongoing, and it has not been out, unlike a lot of others. But I had a whole series of hearings on the House side and participated actively in hearings on the Senate side. And I am extremely concerned about it.

Two weeks ago, President Reagan signed into law the National Science Foundation Authorization bill. It includes a provision relating to the establishment of an International Year of the Greenhouse Effect, based on the model of the International Geophysical Year in 1957 which was such a tremendous success and which, ironically, established the monitoring stations which even now give us the best data available on the greenhouse effect. This is in Hawaii, with measurements of the CO_2 concentrations in the upper atmosphere.

I am convinced that the place to begin, because it is not politically feasible to begin at any other place, is by upgrading the quality of the scientific data that we have on the greenhouse effect and by increasing the level of awareness both in this country and in all of the nations of the world about the dynamics of this problem, consequences of this problem, possible solutions to this problem.

It seems to me, therefore, that a speedy call for an International Year of research on this matter would be a sensible place to begin. I have joined Senator Chafee and others in requesting that the President include this item on the summit agenda, if indeed we are to have a second summit this year or early next, as I hope we will.

This NSF bill requires only that the President report to Congress any action taken or proposed with respect to the establishment of an International Year of the Greenhouse Effect.

Last May I wrote to President Reagan, requesting that he establish such an international program in concert with others, and his response through William Ball, Assistant to the President, was merely that they were reviewing the options.

Let me ask you a couple of quick questions. Number one, have you had an occasion to review the latest data on the greenhouse effect and its seriousness?

Dr. GRAHAM. Yes, I have, Senator Gore, because NASA has a major role in global monitoring of gases such as CO_2 and other possible constituents of the atmosphere.

Senator GORE. NASA was one of the most effective agency witnesses on this problem and has been for several years. Three years ago they testified that measurements by satellites, compared with a meticulous reassembly of shipping records made by whalers early in this century, seemed to confirm that an amount of ice has already melted in Antarctica equivalent to a band the entire circumference of that subcontinent, 60 miles wide, in this century.

This was Dr. James Hansen, doing an outstanding job at NASA in this regard. That is a concrete bit of evidence of the kind that is far more persuasive to many than the computer models and projections that we have to rely most heavily on.

I am glad you are familiar with it. What is your opinion of the proposal for an International Year of the Greenhouse Effect?

Dr. GRAHAM. Senator Gore, I consider the issue of the carbon dioxide buildup in the atmosphere which is, of course, produced largely by the consumption of the fossil fuels around the world to be a very serious matter, and I believe strongly that its relationship to the climate of the earth and to the environment of the earth is something that we must understand much better than we understand it today.

I believe that additional focus is warranted by that subject and would like to suggest that in addition to just the CO_2 aspect of it, there are other potentially significant effects on the climate with other lesser trace materials in the atmosphere, with particulates, and then finally with the larger issue which certainly relates to the greenhouse effect, having to do with ocean circulations, weather and so on.

And while I strongly support an increased interest in the greenhouse effect as specifically related to CO_2, I would also be interested in seeing that interest incorporate other aspects of man's and natural activities which could significantly change the climate over periods of time that we can predict, and I would look forward to taking an active interest in that if I am confirmed.

Senator GORE. Well, I hope so and I hope you will note that I do not use the phrase "CO_2" problem. I prefer the phrase "greenhouse effect." Not to quibble but, as you say, other gases besides CO_2 contribute significantly to it. In fact, chlorofluorocarbons which are implicated as the culprits in the disappearance of ozone above Antarctica may contribute as much as 30 percent of the greenhouse effect, even though in total volume they are only a tiny fraction of the volume of extra CO_2 injected into the atmosphere during this century.

So for two reasons, we need an urgent effort in this country and internationally to deal with the problem of chlorofluorocarbons. And as I am sure you are aware, there is an extremely important scientific mission underway in Antarctica at this very moment, a rare winter expedition to seek more information about the disappearance of ozone at present on a seasonal basis in the skies above Antarctica, and this closely-related problem could be extremely serious if the worst case predictions come true. I hope they don't, of course, as do we all.

Let me also note that as much as 20 percent, perhaps 25 percent of this problem comes, or is believed to come from deforestation. So I fully share your broader definition of the problem. I look forward to working with you on it, and I hope that you will urge the President to respond to the initiative that the Congress has suggested with respect to this International Year of Research on the Greenhouse Effect.

Mr. Chairman, I appreciate your courtesy in letting me go out of order and ask questions here, and I will turn it back over to you.

Senator GORTON. Thank you, Senator, for your excellent subjects.

Senator GORE. Can I submit some additional excellent subjects for response in writing?

Senator GORTON. You certainly can.

Technology transfer, particularly from Department of Defense-sponsored research, is of particular importance, Dr. Graham. The need for cooperative efforts and transfer of results to the civilian science sector and the marketplace is high, as otherwise a great deal of research will be unnecessarily duplicated in both sectors.

Do you believe that you can use your new position to promote this technology transfer?

Dr. GRAHAM. Yes, Mr. Chairman. I would attempt to encourage transfer from those areas of basic research and other governmental applied activities, such as in national defense, to the civil sector wherever that could be done without jeopardizing national security.

At the same time, I believe it is important that the applied research done within the government at taxpayer expense be transferred to industry in such a way that the U.S. taxpayer stands the best chance of deriving the first benefit from it.

Of course, basic research is undertaken in a worldwide community in which, at its best, researchers and information passes rapidly and freely and I think we should strive to protect that, and in some nations of the world where the people engaged in basic research don't have such free access, we should strive to encourage their participation.

But in the applied research area, we are in a new era now for the United States where we are no longer so far ahead of the rest of the world in our infrastructure and capabilities that we can afford to tell them everything we know in the applied area immediately, because many countries of the world can make use of that information just as rapidly as we can, and if the taxpayer is going to pay for it, he should be first in line to get the benefits from it.

So I would look to increasing this technical transfer to our own private sector in conjunction with providing a way of giving the U.S. the first call on that information.

Senator GORTON. As Science Advisor, do you intend to have a continuing role in developing administration space policy?

Dr. GRAHAM. Yes, I do, Senator.

Senator GORTON. Do you envision your new office as taking an active role in developing a post-Challenger space program over and above the work of the National Security Council and the Economic Policy Council?

Dr. GRAHAM. Yes, Mr. Chairman. I would envision the role of the Office of Science and Technology Policy as providing counsel in the technical areas to both the National Security Council, the Economic Policy Council, and finally to the President on national space policy and on the means to implement that policy.

Senator GORTON. Do you believe that a National Aeronautics and Space Council will be helpful?

Dr. GRAHAM. Mr. Chairman, I believe that the high level members of the government, the Cabinet level officers and, of course, the Vice President and the President are now fully engaged in national space policy. And that would not change if the structure of space policy formation were changed.

Right now, civil space related matters are dealt with primarily in the Cabinet Council on Economic Policy and, of course, issues relat-

ed more to national security are addressed in the National Security Council related activities.

There may be some efficiency to be gained by addressing all of those issues in the same arena, but on the other hand there is an efficiency in the existing arrangement of the Executive Office.

As a science and technology issue, I believe it can be addressed adequately in either way. As far as the organization of the Executive Office is concerned, I would try to leave that to the judgment of others.

Senator GORTON. The President has proposed to shift most commercial satellite launches to the private sector.

What barriers—technical, legal and financial—do you see to the establishment of a viable commercial launch industry in the United States? Specifically, do you believe that the problems of insurance and subsidized foreign competition are going to be hindrances or barriers to that new industry?

Dr. GRAHAM. Mr. Chairman, I do not believe there are any legal barriers to the development of a private commercial launch services industry, provided it is done under the present guidance of the President, which is on a "no subsidy" basis.

In terms of the foreign competition, I believe there is very rigorous foreign competition: the Ariane now; the Soviet Union and the Chinese have been proposing commercial launch services, and the Japanese have an H-2 booster under development which will almost certainly be offered in the early 1990s as a commercial launch vehicle.

All of these systems are to some degree subsidized by their governments, and I think if the U.S. is to have a commercial launch industry, which it very much needs in my view to provide a broad base of access to space within this country, the Federal Government can play a significant role in making sure that fair trading practices and a level playing field are provided for all participants in the commercial launch service business.

Finally, in terms of insurance, the insurance industry has lost several hundred million dollars in space operations in the last few years. Insurance is very hard to find and very expensive when it can be found at all. The ultimate cure for that situation is a string of successes in the commercial space launch business, and the Federal Government can help that process by providing the expertise and talent it has available in a consultative role and through making facilities available on a direct cost basis to private entrepreneurs in the commercial launch business. And I would like to see us help commercial launches to that degree.

Beyond that, insurance is going to be a difficult problem in the near term and perhaps we can encourage private companies in the U.S. to band together in self-insurance activities to some degree in the manner in which that is being done overseas.

Senator GORTON. The Chernobyl disaster has raised new concerns in the United States about the safety of all nuclear power plants.

Do you believe that OSTP has a role to play in gathering technical lessons from that accident and in addressing the questions the accident has raised in the minds of our citizens? And, if so, what will that role be?

Dr. GRAHAM. I believe that OSTP can play a role in maintaining an overview of that situation and in coordinating the activities of various parts of the U.S. Government, including the Department of State, the Department of Energy, the Nuclear Regulatory Commission, and perhaps other offices of the Federal Government, as well as participating in the formulation of national policy.

The direct activities will be primarily in those line organizations of the government, but I believe there is much information to be gained, both in nuclear reactor safety and in the effects of radiation on humans through the Chernobyl accident, and that we should make every effort to recover that.

I believe the Department of Energy is in discussion with the Soviet Union now on exactly that subject, and we look forward to good progress in that area.

Senator GORTON. OSTP has taken a more active role in health and biomedical affairs in the past years. The Office has been less active and visible in this area recently, although it remains an important factor in biotechnology issues.

Do you intend to direct OSTP to take a more active or a less active role in health and biotechnology fields?

Dr. GRAHAM. The Office recently participated in a significant way in the development and the release of research guidelines in the biotechnology area which should make a major contribution to our ability to progress in that field in the foreseeable future.

I would hope that OSTP would continue to monitor the effect of those research guidelines and the effectiveness of those research guidelines in the future and suggest changes in them as might be necessary.

It should do that, however, in coordination with the other agencies of the government which have major roles to play in the biotechnology area. This is such a rapidly changing field and has such potential import in so many areas that I think it essential that OSTP provide a broad oversight in monitoring it and be ready to call issues to the attention of other agencies and, of course, to the attention of the President when that is required.

Senator GORTON. Finally, the proposed SuperConducting Super Collider continues to be a controversial issues. High energy physicists strongly support the proposal. Critics worry that other fields of science will suffer financially if the project is funded. The Department of Energy has yet to make a decision on whether to proceed.

In the present budget climate, what is your tentative opinion at least about proceeding with the SSC? And do you see any opportunities for international cooperation in joint funding for that kind of project?

Dr. GRAHAM. If confirmed, I would like to seek counsel of both the Department of Energy, including the Secretary of Energy, and the scientific community in its breadth, as well as specificly the high energy physics community, before developing a definitive view on that subject.

I can say that the SuperConducting Super Collider, if built according to present concepts, would be a world class, unique facility which would explore a range of research in which the U.S. has had a very strong and leading tradition for the last several decades and

which U.S. research tradition would indicate that we should continue.

At the same time, since this would be a world class facility, it seems to me appropriate that we engage scientists not just within the U.S., but from around the world, and their supporting agencies and governments with a view toward their possible participation in the development and operation of such a facility.

Senator GORTON. Dr. Graham, I thank you very much. Senator Gore said he will have some additional questions for you in writing. Other members of the committee may as well. Once again, I want to welcome you and thank you for the candid nature of your answers.

With that, the hearing is adjourned.

[Whereupon, at 11:36 a.m., the hearing was adjourned.]

[The following information was subsequently received for the record:]

PREHEARING QUESTIONS OF SENATORS HOLLINGS AND RIEGLE AND THE ANSWERS

ROLE OF THE SCIENCE ADVISOR AND OSTP

Question. What role do you believe that the Science Advisor and the Office of Science and Technology should play in making federal policy decisions? In particular, beyond providing personal advice to the President, what role would you and the Office play in making budget decisions, reviewing the technical feasibility of major programs, and coordinating decisions among federal agencies?

Answer. By both legislation and custom, the Office of Science and Technology Policy plays a significant role in foreign policy decisions. In addition to providing science and technology policy advice to the President, I see a continuing important role in formulating, in consultation with the departments of the government and in cooperation with OMB, the overall national priorities and the corresponding budget proposals for science and technology related programs. The OSTP also has a major role to play in coordinating science and technology policy and programs among the federal agencies. This role is, of course, one of the Congressionally mandated functions for the office and is reflected specifically in the Federal Coordinating Council on Science, Engineering, and Technology. As I look at the growing importance of science and technology in our industrial base and in our national security posture and see the increasing complexity and interdisciplinary nature of many of our science and technology issues, I believe the coordinating function of OSTP will become increasingly important.

Question. The Federal Government now faces a great many science and technology issues. Which specific issues or problems do you believe deserve priority attention from OSTP? Which issues would you concentrate on as Science Advisor?

Answer. It is important that our national science and technology priorities be balanced across the various disciplinary boundaries. As I look at the national needs in the science and technology area, there are three broad regions which clearly need additional attention. Al three relate directly to my view that we must keep this nation on the forefront of the science and technologies to retain our historical leadership in basic research, to remain industrially competitive, and to maintain a strong national defense.

The first issue is the science and technology talent base. When we look at the statistics of the output of U.S. citizens from our colleges and universities with advanced degrees in science and technology, it is clear that this output has stagnated. A high priroity of OSTP will be to seek ways in which this talent base can be increased to keep up with the growing demands.

The second area which is fundamental to our future growth in the high technology fields and needs continuing attention is the fundamental knowledge base which comes out of our basic sciences. This knowledge base must continue to be expanded through scientific work of the highest quality.

And lastly, there is an area of transferring the new knowledge from the research laboratories to the industrial users. This means that we must have close interaction and sound working relationships between the universities, industry, and the Federal Government's agencies and laboratories.

While in the early decades of this century European science gathered most of the Nobel Prizes, the United States earned a reputation of putting scientific advances to beneficial use. The situation is quite different now; while the U.S. has a commanding position in scientific achievements, some of the key industrial applications seem to find a home in other advanced nations. Automobiles, electronics, optics and some others offer ready examples. Jobs are sure to follow such trends, if they are not given early and national attention.

Question. To whom would you report within the White House? And what formal consultation arrangements, if any, would you and your staff have with the Office of Management and Budget and the National Security Council?

Answer. The Director of OSTP reports to the president. OSTP has had close interaction and cooperation with other members of the President's senior staff, the Office of Mangement and Budget, and the National Security Council. I intend to continue and foster these interactions. OSTP works closely with OMB in advising on budgetary issues and works closely with the NSC, primarily through interagency groups, on issues such as national security matters, space, technology transfer, and international activities.

Question. The Science Act of 1976 authorizes the President to appoint up to four Associate Directors for the Office of Science and Technology Policy. How many Associate Directors do you believe OSTP should have? When might the President nominate individuals for these positions? Would they be responsible for specific policy area, as were Drs. McTague and Healy?

Answer. I have not yet reviewed the current organization and staffing of the OSTP. Should I be confirmed, I will give these matters my early attention.

Question. The President has requested a substantial cut in OSTP's budget for FY 1987, from $2.2 million in FY 1986 to $1.67 million for the coming year. What effect will this cut have on OSTP's ability to monitor and analyze science and technology programs? What steps would you take to ensure that the Office has an adequate number of experienced staff?

Answer. The reduction of the OSTP budget in Fiscal Year 1987 will limit somewhat the scope of our involvement in some programs. Should I be confirmed as Director, I will review the staffing requirements for the office and the corresponding funding needs before I submit an OSTP budget and staffing request for FY 1988.

Question. More and more federal science programs must be conducted as interagency efforts. However, observers criticize many interagency science groups as weak and lacking strong leadership. Can and should OSTP strengthen these interagency efforts? How can it do so?

Answer. OSTP can strengthen these efforts in at least two ways. The first is through the budgetary process. OSTP, in conjunction with OMB, will give the higher funding priorities to those interagency programs that are well-planned and effectively implemented. The participating agencies must clearly recognize this and thus provide the necessary management attention and scientific personnel to the interagency programs to have them do well in the budgetary process. Second, OSTP must identify the best possible chairpersons, members, and staff for its interagency committees under the Federal Coordinating Council of Science, Engineering and Technology.

Question. The President's FY 1987 budget request proposes eliminating the Commerce Department's Office of Productivity, Technology, and Innovation (OPTI) at the end of FY 1987. Given OSTP's reduced budget and staff, do you believe that OSTP would be able to pick up any of OPTI's responsibilities if the President's recommendation is accepted? Which specific OPTI responsibilities, if any, could and should OSTP perform?

Answer. If OPTI is eliminated, I would certainly look at the broader technology policy issues from OPTI that might be appropriately addressed by OSTP.

I have not had the opportunity to examine the OPTI activity, currently available results and the reasons (except the stringent budget constraints) that led to its proposed elimination. I assume that a substantial fraction of the OPTI results to date has to do with organizational and procedural matters. Important as these may be, they are not areas where the OSTP can effectively contribute. I anticipate that OSTP will review the situation and will attempt to suggest constructive interaction between this Office and the Deparment of Commerce to pursue the scientific and technology aspects of industrial productivity.

Question. When Dr. McTague served as Acting Science Advisor, he made a particular effort to improve communications with Congress, including more meetings between OSTP and Congressional staff. Would you support similar efforts to maintain communications with Congress?

Answer. Yes. I understand that these meetings have been quite effective in identifying and communicating concerns on many scientific, technological, management, and programmatic issues. If confirmed, I look forward to maintaining close communications with Congress.

INTERNATIONAL COMPETITIVENESS

Question. In early 1985, the President's Commission on Industrial Competitiveness (the Young Commission) reached these important conclusions about technology and economic competitiveness: "Technology propels our economy forward. Without doubt, it has been our strongest competitive advantage . . . There is not enough research with industrial competitiveness as its goal. . . . Manufacturing technology needs more emphasis." Do you agree with these conclusions? If so, what actions would you take as Science Advisor to increase the quantity and quality of research with industrial competitiveness as its goal?

Answer. I agree with these conclusions. To enhance the quantity and quality of research with industrial competitiveness as its goal, I would foster closer interactions between industry and the universities so the industrial needs are more clearly understood and reflected in the university research and educational programs. The NSF program for Engineering Centers of Excellence is an example of a program that enhances this interaction.

Question. According to National Science Foundation statistics, in 1983 West Germany spent 11.0 percent of its public-funded R&D monies on measures to advance industrial growth. Japan spent 6.0 percent on industrial growth. The United States, by contrast, spent 0.3 percent for this objective. In your personal opinion, is the U.S. figure too high or too low? If the latter, what steps do you believe should be taken to augment this level?

Answer. This refers to foreign Government subsidies for doing research that corportions would like to have done—an "NSF for industrial research." For example, the well-known Japanese MITI effort for a fifth generation computer system is such an activity.

In making these comparisons, it must be remembered that the U.S. research and development enterprise depends more on individual initiatives than do those in West Germany and Japan. The precise meaning of the statistics renormalized for different governmental systems and scaled to GNP may show that the U.S. investment percentage is not as unbalanced as the data would suggest and leaves the real initiative with the U.S. private sector, which should be able to accurately target such research.

Question. Concern has grown in recent years that the United States may allow more access to its technology—both public and private—than other countries provide to Americans. For example, U.S. government technology is freely sold through the National Technical Information Service, foreign students enroll in American universities in large numbers, and American companies often share their technology through licensing agreements, joint ventures, or overseas production arrangements. In your judgment, does this massive transfer of American technology to our economic competitors constitute a problem? Do you believe other countries provide us with less access to their technology than we provide for them? What actions, if any, do you believe the federal government should take in this area?

Answer. We are rapidly entering the information age. Modern technology makes the movement of information around the world a speedy, cost-effective process. The future will belong to those countries, companies, and people who know how to harvest, harness, and utilize this information. We should by all means keep our information channels open to basic research in the U.S. and abroad. NTIS provides a very valuable service in centralizing much of the public sector technology information generated by government, and we should encourage American industry to utilize this information. We should also encourage American industry to support and utilize information from worldwide systems to strengthen our national economic competitiveness. Of course, we have an effective system of classification in this country which keeps militarily sensitive technology out of the public sector flow.

OSTP has played an active role in the Senior Interagency Group investigating technology transfer problems. As Science Advisor, I would support the deliberation of these study groups and assist in bringing their recommendations forward for implementation.

While recognizing the importance of preventing undesirable transfer of militarily or competitively significant technology to foreign nations, we also must be aware of the trend which shows the increased sensitivity of foreign nations to the economic risks involved in transferring their technology advances to the United States. The

OSTP can, and intends to, play a key role in ensuring that the international exchanges in science and technology are and remain, in the whole, beneficial to the United States long-term goals.

Question. Congress is now close to enacting the Federal Technology Transfer Act of 1986, a measure to accelerate the transfer of unclassified technology from federal laboratories to American industry and the states. Do you support this particular piece of legislation? What role, if any, will OSTP play in encouraging federal agencies to implement this legislation?

Answer. Currently, there are two versions of this legislation. While I have not yet reviewed this legislation, should I be confirmed, I will review both versions.

Question. Congress strongly supports both the National Bureau of Standards and the National Science Foundation. Both contribute to U.S. industrial competitiveness, especially the Bureau's programs to provide the measurement and test methods necessary for advanced research and improved manufacturing. Yet since 1980 the Bureau's budget has stayed essentially level in real terms, while NSF has enjoyed large real increases. Why, in your judgment, has NSF received large increases while the Bureau has not? Do you personally believe that this trend should be continued in the future?

Answer. In general, the government's role should be focused toward basic research and industry's role toward industrial research and manufacturing. With that in mind, if confirmed, I will look into balance of funding across government agencies.

Question. Some science policy observers argue that since the National Science Foundation must support a very wide range of sciences, it will never be able to concentrate on the support of university basic research aimed at improving engineering and U.S. industrial competitiveness. These observers suggest that creation of a separate National Technology Foundation or Advanced Technology Foundation. What are your personal views regarding the ability of NSF to bolster industrially relevant science and regarding the advisability of creating a separate technology foundation?

Answer. The NSF currently supports industrially relevant science, engineering, and technology at universities. The NSF Engineering Research Center are a specific example of a major new initiative which has significant implications for the university-industry interface and the education of future engineers. In addition, U.S. corporations are part of the national R&D infrastructure and as such have a responsibility to make investments that further their competitive position. If confirmed, I will review the status of industrially relevant science and consider the advisability of recommending additional organizations in this area.

SPACE PROGRAMS

Question. As Science Advisor, what continuing role would you personally play in developing administration space policy? Do you envision OSTP talking an active role in developing a post-Challenger space program, or will these decisions be left primarily to the National Security Council and the Economic Policy Council?

Answer. Both as Science Advisor to the President and as Director of the OSTP, should I be confirmed, I expect to play a significant role in the formulation of our space policies. The National Security Council and the Economic Policy Council are responsible for bringing to the President's attention the views of the departments and agencies represented in their Working Groups. I expect to contribute to the scientific and technical national security, civil, scientific, and commercial space activities; review the rationale for the selected technical approaches from the perspective of the President's long term space goals; and advise the operative branch on alternatives, and priorities.

Question. The President has proposed building a new orbiter to replace the Challenger. Exactly how would the administration pay for the new orbiter?

Answer. I see the funding as a national issue in addition to being a NASA issue. Plans for funding of a fourth orbiter are still being developed and I anticipate that these plans will bed finalized and sent to the Congress with the 1988 budget submission.

Question. The President's new NASA proposal appears to reduce the funds available for space science at that agency. Exactly what would be the NASA space science budget for the next three years under the President's plan? Which science programs would be kept, which would be postponed, and which would be eliminated?

Answer. I will support a strong and well-balanced space science program as a foundation for NASA's future activities in space.

The proposed NASA space science budget for 1987, as amended, is $1.483 billion. The FY 1988 budget and the associate programs are still being developed within the administration and should be presented to the Congress along with the entire 1988

budget. However, since the figures submitted by the Administration last year for 1988–1989 were not based upon the loss of the Challenger, I would expect that some adjustments would be made this year.

Question. The President also has proposed to shift most commercial satellite launches to the private sector. What barriers—technical, legal, and financial—do you see to the establishment of a viable commercial launch industry in the United States? In particular, do you believe that problems of insurance and subsidized foreign competition will hinder the new industry? If so, what can be done to reduce these barriers?

Answer. In implementing the President's policy in the area of space launch services, I see no serious legal barriers.

In the technical and financial areas, a U.S. launch services industry faces substantial foreign competition today from Ariane and, the foreseeable future, from Japan as well. The Peoples Republic of China and the U.S.S.R. have also offered to sell launch services. Since all of these foreign launch operations are at least partially subsidized by their governments, it is important to the U.S. launch services industry that the U.S. monitor the foreign competition efforts to assure that they comply with fair trade practices. With the shuttle facing a large backlog of government and scientific launch requirements and both by necessity and by policy not a commercial launch competitor, if the federal government can contribute to assuring a "level playing field" in commercial launch services, I believe that U.S. commerical enterprise should be able to compete effectively in the domestic and international market.

In the area of insurance, underwriters have incurred substantial losses in the last few years. These losses have made insurance both scarce and expensive. It will require a series of launch successes to change the current insurance picture. NASA and other governmental experience should be made available to private enterprise to maximize the chances of establishing a series of successes and eventually reestablishing the confidence of the insurance industry in space launch activities.

Question. Along with decisions on the fourth orbiter and commercial launches, the Congress also must decide whether the government should reply more heavily in the future on unmanned launch vehicles and when to begin design and development of a new post-shuttle generation of vehicles. What are your personal opinions on these two issues?

Answer. It is clear that a mixed fleet of manned and unmanned launch vehicles is required to meet the national needs. While the DoD's current plans rely heavily on unmanned launch vehicles, it is exploring the potential contributions of human crews to the performance of space missions judged critical to our future military posture. NASA is reviewing its scientific satellite payloads to assess needs that might be filled by expendable launch vehicles.

There is presently a NASA-DOD study which is addressing the issue of post-shuttle launch vehicles. The results of this study are that further technical advances in structures and propulsion are required before new post-shuttle generation design and development activities are undertaken.

Question. In your personal opinion, how would a decision not to construct a fourth orbiter affect our ability to build the manned space station? Would we have to postpone or cancel the station?

Answer. The space station schedule cannot be maintained without at least the additional launch capacity of a fourth orbiter. Otherwise, at a minimum there would be a substantial schedule slip. The precise length of that potential schedule slip would have to be assessed in light of the NASA review now underway for the space station configuration and assembly sequence.

ENERGY AND ENVIRONMENT

Question. Several federal agencies, as well as private American group, now wish to cooperate with the Soviets in long-term health studies of the victims of the Chernobyl accident. What role, if any, do you believe that the Science Advisor and OSTP can play in coordinating U.S. efforts in this areas and ensuring that health information is gathered and disseminated?

Answer. OSTP has very closely followed and has been involved with the Federal Government's activities designed to:

support the provision of U.S. Government assistance to the USSR for humanitarian reasons by offering personnel, equipment, supplies and information that may be of use in health and medical care to persons affected by the Chernobyl accident, and

support efforts to collect information appropriate for the worldwide advancement of knowledge with respect to health and environmental consequences of the release of radioactivity.

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In part, these activities in the late spring and early summer resulted from a continuation of efforts by the Subcommittee on Health Effects (including OSTP representatives) of the President's Task Force on the Soviet Nuclear Accident. Since the USSR discouraged the U.S. Government's offer to assist immediately following the accident, the Subcommittee's initial efforts were directed toward: (1) guidance to U.S. citizens abroad; (2) monitoring domestic radioactive fallout; and (3) monitoring imported foods.

An agreement was subsequently reached between OSTP and the Department of State (DOS) that the latter would assume coordination of the Federal Government's related interest, capabilities and liaison with the Soviet government. If confirmed, I will encourage and promote the acquisition and dissemination of both health and safety information from the Chernobyl accident.

Question. The Chernobyl disaster has raised new concerns in the United States about the safety of all nuclear power plants. Do you believe that OSTP has a role to play in gathering technical lessons from that accident and addressing the questions that the accident has raised in the minds of our citizens?

Answer. The Chernobyl disaster provides an example to all of the world of the need for stringent adherence to comprehensive safety guidelines and standards necessary in the operation of any nuclear facility. The United States has historically been a leader in the formulation of the standards and regulatory policy for the use of nuclear power.

Although the Office of Science and Technology Policy has closely monitored the events following the Chernobyl accident, it depends upon other agencies to collect and carefully assess all available data. Immediately after the event, the President formed a Task Force on the Soviet Nuclear Accident to monitor its health and environmental consequences. That Task Force consisted of experts in nuclear power, radiation, public health, agriculature, meterorology, international affairs, and environmental protection. The Task Force operated on a daily basis from April 30 to May 14, 1986. On May 29, 1986, the Administrator of EPA, as the Chair of the Interagency Task Force, released the Task Force Reprot on the accident. It provided information and a better understanding of the scope of the accident.

Following the initial effort to assess the Chernobyl accident, the Federal Agencies, including OSTEP, and the International Atomic Energy Agency are now examining such key issues as international notification of emergency circumstances, uniform data collection and dissemination, and international standards of protection.

Question. The NSF Authorization Act for FY 1987 contains a provision asking the President for a report on the possible establishment of an International Year of the Greenhouse Effect in 1991. That provision reflects growing Congressional concern about the environmental and economic effects on a worldwide warming trend. Will OSTEP be involved in the preparation of that report? Do you personally believe that the United States should seek to establish this international year?

Answer. The NSF act states that the President shall submit a report to Congress on any action taken or proposed by the Federal Government with respect to the estabishment of an International Year of the Greenhouse Effect to occur in 1991.

Several years ago, concern about the growing levels of CO2 in the atmosphere led to studies by the NAS, and others, to determine if there was a "greenhouse effect," i.e., would the atmosphere trap radiation from the sun due to increased atmospheric levels of CO2? The answer seems to be yes, and that this would lead to a warming and possibly other changes in the earth's climate resulting in shrinking polar ice caps, rising sea levels, and flooding of low lying land (e.g., much of Florida). The level of CO2 has been increasing mainly due to the combustion of fossil fuels and a worldwide reduction of foliage (deforestation) which coverts CO2 to biomass and O2.

A number of agencies have been supporting research in these areas—NASA, DOE, NSF, and should a report to the Congress be mandated, OSTP will be involved in its preparation. I personally believe that emphasis should be placed on the entire subject of global monitoring for large-scale environmental status and changes.

Question. What is your personal view of the research programs at the National Oceanic and Atmospheric Administration and the Environmental Protection Agency? Are they large enough? Do they focus on the correct issues? Do you believe that they provide the information needed to make informed regulatory and program decisions?

Answer. It is important that EPA and NOAA maintain strong research programs. For the EPA, a strong research and development program is essential in its regulatory and enforcement responsibilities to protect human health and the environment. For NOAA, research supports the needs of the department of Commerce as it relates to our use of marine and atmospheric environments. I have not yet reviewed

these programs but if confirmed would do so in the content of the overall national and international research programs in related areas.

HEALTH AND BIOTECHNOLOGY

Question. Wen Dr. Keyworth sereved as Science Advisor, he directed Dr. Healy, a physician, to take a more active role in health and biomedical affairs. Since Dr. Healy left OSTOP, the Office has been less active and visible in this area, althrough it remains an important actor in biotechnology issues. Would you direct OSTP to take a more active or less active role in the health and biotechnology areas?

Answer. Dr. Bernadine Healy, a physician of high professional standing in the health community, attracted a great deal of interest in the programs that were initiated and directed in OSTOP. OSTOP has continued an active involvement in health issues.

In addition to the OSTP role in evaluating the health-related budgets of the Federal agencies, OSTP has membership on the National Cancer Advisory Board, the National Heart, Lung and Blood Institute Advisory Council the Spinal Cord Injury Committee and the Domestic Policy Council's Working Group on Health Issues. Furthermore, OSTP continues to follow the toxicology programs of the Public Health Service and provides leadership for interagency programs involving Agent Orange and radiation. I see no need to change these OSTOP activities at this time.

Question. What specific biotechnology issues, if any, will OSTP address over the next two years?

Answer. Over the past two years, the Administration has promoted the coordination of the principal regulatory procedures and research supporting Federal agencies in biotechnology. It has done this within the Cabinet Council structure by establishing the Biotechnolgy Working Group, and through OSTOP and its FCCSET, by establishing the Biotechnology Science Coordinating Committee (BSCC).

Several subcommittees of the BSCC will begin, or will be continuing their work. One is the Subcommittee on Risk Assessment. Its effort will be focused chiefly on questions of risk and safety of genetically engineered organisms released into the environment.

The obverse of "release" is "containment." For regulatory purposes, however, the meaning of containment outside the traditional laboratory setting needs to be thoroughly reviewed. A BSCC Subcommittee on Containment is being organized and its report to the full Committee has been requested early in 1987.

Another issue which concerns the BSCC is the availability and quality of trained personnel for both academic research and industrial R&D. "Risk assessment," "release" and "containment" impinge on research and training in disciplines of environmental biology. OSTP has devoted considerable effort in the past year to defining research needs in plant science and microbial ecology related to biotechnology.

OSTP recognizes that regulatory policy in biotechnology is evolutionary. Enlightened policy depends on adequate and coordinated agency review sufficiently rigorous to ensure safety of research and products, but flexible enough to permit data accumulation from case by case experience under realistic field conditions. As a working partner with other member nations of OECD and the European Community also concerned with environmental release, OSTP will assure that international interests in safety are thoroughly reviewed.

Question. Are you personally satisfied with the direction and results to date of the federal research effort to find a cure for AIDS?

Answer. I am satisfied with the Federal AIDS programs conducted by the Public Health Service under the direction of the Assistant Secretary for Health. The enormous investment in biomedical research that the U.S. has made over the last 40 years has provided us with the tools to identify the HTLV-III/LAV virus associated with AIDS and with a test to screen our blood supply for contamination with the virus. In addition, the high risk groups and the principal modes of transmission of the virus have been identified, and a public education program launched. Although uninfected homosexual men have continued to acquire HTLV-III/LAV infections during the past year, the rate is lower than the increases in previous years and the increase in the number of potentially infectious persons would indicate.

The AIDS budget increased from $108.6 million in FY 1985 to $233.8 million in FY 1986 with a projected budget of close to $350 million for FY 1987. The research community has responded with great vigor and has made the tremendous effort to find a cure and a vaccine for this terrible disease. Both antiviral agents and immunomodulators are being developed; several drugs are under clinical investigation at present.

LARGE RESEARCH PROJECTS

Question. At their summit meeting last year, President Reagan and General Secretary Gorbachev agreed in principle to a joint U.S.-Soviet fusion research program. Yet to date no real details on this project have been settled. Why has the project been delayed, when do you expect it to begin, what will it consist of, and what will be the financial cost to the U.S. government?

Answer. The President and Secretary Gorbachev agreed in Geneva to encourage the widest possible multilateral collaboration in fusion research to ultimately obtain this potential source of energy. At Geneva, the President further stated that any multilateral fusion activity in which the U.S. participated would be dependent upon the full participation of our allies and strict adherence to COCOM's policy on technology transfer. Since then, the interested parties and our government have been examining a range of options on how best to implement the President's commitment at Geneva and advance our broadest national interests.

Determining what is the best option to pursue with the Soviets to fulfill the President's commitment at Geneva is both a complex technical and political issue with serious implications affecting our nation's domestic science policy and priorities, our R&D resource base, as well as our technology transfer and strategic concerns. Therefore the government is being very deliberate in assessing the full range of issues, and program plans are still in development.

Question. The proposed Superconducting SuperCollider continues to be controversial. High-energy physicists strongly support the proposal. Critics worry that other fields of science will suffer financially if the project is funded. The Department of Energy has yet to make a decision on whether to proceed. In the present budget climate, what is your personal opinion about proceeding with the SSC? Do you see any opportunities for international cooperation and joint funding for this type of machine?

Answer. In order to effectively conduct research in an area like High Energy Physics it is necessary to have advanced accelerator capabilities. The DOE FY 1987 budget for the third consecutive year contains funds for advanced accelerator design including work on superconducting magnets and systems. A thorough review of the SSC Conceptual Design Report and cost estimate was submitted to DOE in the Spring of 1986. The direction of FY 1988 high energy physics accelerator R&D activities is still under consideration and I have not yet informed a personal opinion about proceedings with the SSC.

Should the U.S. proceed, I believe that there maybe opportunities for international cooperation, but these are still in the very early exploratory stage.

UNIVERSITY RESEARCH

Question. The recent Packard-Bromley report on the health of U.S. colleges and universities argues that "our universities today simply cannot respond to society's expectations for them or discharge their national responsibilities in research and education without substantially increased support." What is your reaction to this report? If you agree with its recommendations, what steps would you take as Science Advisor to implement them?

Answer. First, I should like to compliment the White House Science Council and its Panel on Colleges and Universities on their excellent report.

Due to current budget constraints, the first step in implementing the recommendations will be to set some priorities within the recommendations, and then weigh these recommendations against other areas of federally funded science and technology.

Question. The Director of the National Science Foundation and others have proposed that federal mission agencies should place increased emphasis on basic research relevant to their missions. What is your view of this proposal, and how do you think it could be accomplished?

Answer. Fundamental or basic research may lead to innovative, radically different means to approach problems. Applied research relevant and development often lead to improvement of an existing concept.

Federal emphasis on basic research is clearly in the long-term national interest. The Administration has been increasing its support of basic research at the expense of projects which are more properly in the purview of the private sector. OSTP has and can continue to play a role in the coordination, review, and oversight of this effort.

Some combination of new funds, redirection of present funding and termination of existing mature projects would be necessary to enhance support for basic research at levels that are required for any major new agency initiatives.

Question. Through the Packard-Bromley report and other means, the university community has asked the Federal Government for a "facilities fund" to help finance new buildings and facilities. What do you personally believe is the Federal responsibility with respect to university building?

Answer. The first consideration in determining an appropriate approach to the Federal role in providing support for research infrastructure should be the well-being of the Federal/university partnership, a mutually beneficial relationship. This country has never had a Federal university system, but has left the primary responsibility for financial support of the universities to the states, to the students and their families, and to private philanthropy. The Federal Government has long recognized its role as primary source of support for basic research in the physical, life and engineering sciences. A portion of this support must provide for facilities and equipment used for federally funded research, but the Federal Government cannot and should not provide a comprehensive solution to all infrastructure needs. I believe that the Federal Government should be a partner with other organizations in funding facilities and equipment for new university facilities.

Question. The controversy over university indirect costs (the "A-21 controversy") continues. What do you personally believe should be federal policy in this area? What role will OSTP play in developing indirect cost policies?

Answer. The recommendations on the indirect cost issue in the White House Science Council (WHSC) report on the health of U.S. colleges and universities are the result of a long process of discussion and deliberation. The University Panel was composed of very distinguished university administrators and faculty and representatives from industry. The Panel and the OSTP staff received input from over 100 members of the university and industrial research community. The recommendations represent the best thinking of the WHSC and its panel. I support their implementation.

OSTP has had a leadership role in developing indirect cost policy for this Administration. I expect it to continue to coordinate this effort in all of the Federal Agencies.

NATIONAL SECURITY

Question. A large debate continues over the technical feasibility of key components of the Strategic Defense Initiative (SDI). What steps would you as Science Advisor recommend to resolve these technical questions?

Answer. As Science Advisor I would expect to review the program both in its national security context, and in its relationship to our overall science and technology program. Should I perceive that changes should be made in our SDI program I would not hesitate to work with the Department of Defense and the Department of Energy to coordinate the program so that it would answer new issues which might arise.

Question. What role would you play as Science Advisor in advising the President and the National Security Council on questions of strategic policy and arms control? Do you anticipate that you would be asked to judge the technical feasibility and merits of different strategic and arms control options? Does OSTP currently have the staff and expertise to make informed judgments on such matters?

Answer. The President's Science Advisor is mandated by public law to address strategic policy and arms control issues from a science and technology perspective. I would vigorously pursue this change since I believe our national security and arms control policy must have firm technical underpinning.

Question. Given that the nation's defense effort requires large numbers of talented young scientists and engineers, some observers believe that the Department of Defense should do more to support the university training of new PhDs. The Defense Department has responded with a new University Research Initiative. Are you concerned about a possible shortage of young scientists and engineers, or a diversion of available people from industrial needs to defense? Do you favor greater support of university research and education by the Department of Defense?

Answer. Investment in the technology base is the vital long term component to maintain the nation's sustained growth, security, and industrial competitiveness. Quality university research, in particular, is an investment in our nation's future. Improving the health of our universities has been a consistent Administration policy. In general, I favor support for the universities, and the Defense Department's University Research Initiative is a part of that support. The concern that there will be insufficient numbers of young scientists and engineers to meet the nation's needs was addressed by the recent "White House Science Council's Report on the Health of American Universities" submitted by Divid Packard to the President. I share that concern and as the Director of OSTP will work to support the necessary

efforts to alleviate a shortage of scientists, engineers or technologists in the defense, industrial, and academic sectors.

Posthearing Questions of Senator Gore and the Answers

As you are aware, in June of 1983, the Environmental Protection Agency announced plans to regulate the deliberate release of genetically engineered organisms under the Toxic Substances Control Act (TSCA). The precipitated an interagency turf battle between the EPA, the Department of Agriculture and the Department of Health and Human Services about which agency would have responsibility over the various aspects of regulating deliberate releases. As a result, the OSTP created the so-called Biotechnology Science Board (BSB) to serve as a coordinating mechanism. However, this initiative failed and was replaced in November of 1985 with another initiative known as the Biotechnology Science Coordinating Committee (BSCC). As I have stated in the past, the BSCC is lacking in my view in that it has no authority to enforce or arbitrate interagency disagreements, and to that extent appears to be little more than a discussion group.

Question. Do you intend to seek the authority to arbitrate interagency disputes in regulating deliberate releases of genetically altered substances and organisms?

Answer. The regulatory policy of the federal agencies involved with the review of biotechnology research and products was published in the Federal Register of June 26, 1986. This is the most recent notice in the evolving coordinated framework of the federal agencies. The Domestic Policy Council provides the appropriate forum and mechanism to review the federal policy and coordinated federal regulatory framework. It considers policy matters related to agency jurisdiction, commercialization and international biotechnology matters. Since the authority to arbitrate and resolve disputes between the agencies resides with the Domestic Policy Council, the Cabinet and ultimately with the President, I would not propose such authority for OSTP. However, since biotechnology is a rapidly developing field, the Director of OSTP, the Chairman of the Domestic Policy Council Working Group, and their respective committees, including the BSCC, should carefully monitor events and participate in guiding regulatory policy.

Question. What else, in your view, is needed to ensure that a reasonable regulatory scheme is implemented, one which is not overly onerous to the industry, yet does an adequate job of protecting the public health?

Answer. Under the Domestic Policy Council, the appropriate agencies have developed a regulatory framework—the Coordinated Framework for Regulation of Biotechnology—which was published in the Federal Register last June 26. The policy statements in this framework were based upon a conservative approach which, in my view, should be relaxed only as experience, data and judgment warrant. The public was invited to submit comments until September 26, 1986. These comments may offer useful suggestions, amendments or alternatives for the improvement and clarification of the coordinated framework. The Domestic Policy Council Working Group on Biotechnology and the OSTP plan to consider these comments carefully in further developing regulatory policy that ensures fairness to industry and protection of the environment and the public health.

Question. Lastly, what is your assessment of the knowledge base we have to make intelligent, predictive risk assessments in this field?

Answer. The growth of knowledge from research related to biotechnology has been very rapid. The conservative approach to regulation adopted in the recent (June 26) Federal Register notice, however, recognizes that the existing data base relevant to intentional release is neither so broad nor so deep as to eliminate the need for a case-by-case study of research and product applications. The Biotechnology Science Coordinating Committee (BSCC), has formed subcommittees charged with the responsibility to continue the study of risk assessment and research needs. Data and analysis obtained in this process will be used in the further development of a sound and productive policy.

SONIA LANDAU AND R. KENNETH TOWERY, TO BE MEMBERS OF THE BOARD OF DIRECTORS, CORPORATION FOR PUBLIC BROADCASTING

WEDNESDAY, SEPTEMBER 17, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 10:30 a.m., in room SR-253, Russell Senate Office Building, Hon. Barry Goldwater presiding.

Staff members assigned to this hearing: Macky Ayers, professional staff member; Dan Phythyon, staff counsel; and Tom Cohen, minority staff counsel.

OPENING STATEMENT BY SENATOR GOLDWATER

Senator GOLDWATER. The meeting will come to order. Good morning. I am pleased to welcome you here this morning as the Commerce Committee convenes the nomination hearing on Ms. Sonia Landau and Mr. R. Kenneth Towery, President Reagan's choices to be members of the Board of Directors of the Corporation for Public Broadcasting.

Ms. Landau has served on the CPB Board since 1981 and was Chairman of that Board when her term expired in March of this year. I believe that her experience with the media has proven very valuable to her in performing her duties on the CPB Board. Her record has been distinguished and I am very much in favor of returning her to that post.

Mr. Towery has also been a member of the CPB Board since 1981. He was serving as Vice Chairman of the Board when his term expired. Prior to becoming a member of the Board of Directors, he was Press Secretary and Administrative Assistant to Senator John Tower.

In addition, he has served as Deputy Director for Policy and Plans at the USIA. I believe his career speaks for itself.

Now, I am aware that there is some opposition from the Democrats because the administration has not yet sent us a name for the open Democratic seat on the Board and I cannot understand why the administration has not done that. I think the Democrats have every right to object to that kind of treatment. But it is my strong belief that we will get a qualified Democrat nominee soon. I do not see any good reason to hold up these two qualified candidates from returning to the Board.

In addition to that, I might say that the Annual Meeting of the Board is in trouble. There is not going to be a meeting because there will not be a quorum. Mr. Brookhiser said that he and Mr. Hanley will not attend the meeting. Hanley could not be reached in numerous attempts. Howard Gutien already has said he would not attend because of his wife's illness. That would leave two Board Directors, Sharon Rockefeller and Lloyd Kaiser, for the meeting. That is one short of a simple majority of three that is required by bylaws to constitute a quorum.

There are 10 seats on the CPB Board, but only 5 are currently filled, so that makes it increasingly important that we do take some action.

Senator Pressler, did you have a statement that you wanted to make?

OPENING STATEMENT BY SENATOR PRESSLER

Senator PRESSLER. Yes, Mr. Chairman, very briefly. We are working in the Impeachment Panel regarding a Federal judge this morning so I will shortly have to leave again. I apologize. But I feel so strongly about this matter that I wanted to make a brief statement and leave a question or two for the nominees.

Let me say that I strongly support both Sonia Landau and Ken Towery. It is my strongest feeling that we have neglected the CPB Board for far too long. We are currently running with half a Board. It would be irresponsible for both the administration and the Senate to allow this to continue. I hope we can move these nominations through the committee quickly and see this matter through confirmation by the full Senate.

I have had the opportunity to get to know Sonia Landau over the last couple of years. Not only is she well qualified for this position, but she is committed to a strong, nonpartisan and effective CPB.

Both of these nominees have a proven track record at the CPB. They have done an outstanding job and should be returned. Let me say that the description Senator Goldwater has just given is very good and I hope any member of the administration here will take note that this senator at least is very disturbed that in fact we are in the middle of a mess on the Board. It is an embarrassment that it is not able to meet. Let us get our work done. I hope the administration does whatever is necessary. Let us have some meetings, work it out, but this is the kind of thing where government breaks down almost.

This is a Board we count on; it is one that we oversee, and I think all of us had better get together. The administration should do its part and we have to do our part, but I think we are in the middle of a potentially very bad thing for public broadcasting and we should resolve it.

Senator GOLDWATER. Thank you very much.

Senator Broyhill, I would like you to introduce Ms. Landau if you would.

STATEMENT OF HON. JAMES T. BROYHILL, U.S. SENATOR FROM NORTH CAROLINA

Senator BROYHILL. Thank you very much, Mr. Chairman. I will be brief. It is my pleasure to appear before your committee today to introduce and to also endorse the confirmation of the nomination of Ms. Sonia Landau to continue as a member of the Board of the Corporation for Public Broadcasting.

In seeking people to serve in these important posts and on these important boards, we do seek people who are well qualified from the standpoint of education, training, and experience. And Ms. Landau meets all of those tests. She is very well qualified. You have before you the outline of her past experience and her past involvement in public affairs.

I would only say, Mr. Chairman, as a sidelight here, I think I am the only member of Congress, still serving in Congress, who was a member of the committee and a member of the Conference Committee that created the Corporation for Public Broadcasting and that were present at that time.

Of course, I am very familiar with the law and the program and have always been supportive of it. The law does require, of course, programming be under strict adherence to objectivity and balance. Also, as you know, this program has been operating under changing and restrictive funding conditions and there has been over the years the reliance on Federal funds and, of course, due to budget constraints, the increasing funding that did occur every year for some time has not been occurring. So public broadcasting is going to have to travel the road from government to alternative funding sources.

I would hope, just as a sidelight, that the Board could be working to help us to develop alternative funding sources and not have to rely totally on Uncle Sam for this funding.

Of course, the Corporation must also contend with a rapidly changing communications marketplace, a marketplace that makes sure that people are receiving diversity in programs.

So these are challenges that are before the Board and we must have competent people at the Corporation for Public Broadcasting in order to meet these challenges. We are fortunate to have a woman of Ms. Landau's character, her experience, and qualifications and strengths to serve on the Board during these difficult times as they are searching for answers to many of these questions.

Thank you, Mr. Chairman.

Senator GOLDWATER. Thank you very much. Ms. Landau, you may be seated back where you were.

Senator Gramm, would you introduce Mr. Towery.

STATEMENT OF HON. PHIL GRAMM, U.S. SENATOR FROM TEXAS

Senator GRAMM. Mr. Chairman, let me say it is a distinct honor for me to be here today to introduce Ken Towery and recommend his nomination to you. Ken Towery is a highly respected journalist in my State. He is a winner of a Pulitzer prize. The State legislature has passed commendations honoring his excellent work. As you mentioned, he was a mainstay in the successful career of my predecessor,

He has served on the Board. He served at USIA. Everything he has done he has done well. He has done it in an efficient manner. He has brought common sense, sound practices, and the basic philosophy that we all support in good government and good administration.

So I am very happy to be here. In fact, Ken honors me, giving me an opportunity to introduce him and to recommend him to you.

Senator GOLDWATER. Thank you very much, Phil. I think we will take Ms. Landau first.

I understand that Frank Mankiewicz is here. Yes, I thought I saw you back there, Frank. Do you want to testify?

Mr. MANKIEWICZ. Yes, sir.

[The biographical sketch follows:]

BIOGRAPHICAL SKETCH OF SONIA LANDAU

Address: 121 East 61st Street, New York, New York 10021. Business: None.

Position to which nominated: Board of Directors, Corporation for Public Broadcasting. Date of nomination: March 26, 1986.

Date of birth: July 14, 1937. Place of birth: Wichita, Kansas.

Marital status: Married. Full name of spouse: John Joseph Corry.

Name and ages of children:* Colette Corry, 22; Janet Corry, 19.

Education: Institution, Dates attended, Degrees received, Dates of degrees: University of Texas, Austin, Texas, 1954–1955. University of Denver, Denver, Colorado, 1955–1958, B.A., June 1958. University of California, (Graduate School), Berkeley, California, 1958–1959.

Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment:

1959–1963: Los Angeles Board of Education, Los Angeles, Calif., Teacher.

1969–1972: Congressional Campaign Committee, Washington, D.C., Director, Radio and Television.

1973–1976: Royer Ailes and Associates, Inc., New York, N.Y., Media Consultant.

1977–1978: The Dreyfus Corporation, New York, N.Y., Director, Corporate Affairs.

1979: J. Walter Thompson, New York Republican, London, England, Corporate Consultant.

1980: State Finance Committee, New York, N.Y., Executive Director.

1980–1981: Reagan's Transition Office—NEA, Washington, D.C., Transition Team.

1984: Reagan-Bush '84, Washington, D.C., National Chairman, Women for Reagan-Bush.

Nov. 1981–March 26, 1986: Board of Directors, Corporation for Public Broadcasting; Vice-Chairman—Sept. 1982 to Sept. 1983 and January 1984 to Sept. 1984; Chairman—Sept. 1984 to Sept. 1985, and Sept. 1985 to March 26, 1986 (i.e., expiration date of Board term; renominated by President).

Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions:

1975–1976: Mayor Beame's Task Force on Rape.

1976: Republican nominee for the U.S. House of Representatives.

STATEMENT OF SONIA LANDAU

Ms. LANDAU. Good morning, Chairman Goldwater, Senator Long. I have a very brief opening statement.

I am honored to appear here before you today with my colleague, Ken Towery, as the President's nominee to serve a second 5-year term on the Board of Directors for the Corporation for Public Broadcasting.

During my first term on the CPB Board of Directors, I was elected to serve as Vice Chairman and later as Chairman.

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* Step children.

Tranquility, I admit, may not have been the hallmark of my chairmanship. Change seldom is. But, throughout, I have held to one guiding principle. That has been to represent and to serve the public interest to the best of my ability, mindful of our congressional mandate and accountability.

In keeping with this basic principle, I have sought to discharge my fiduciary responsibility as a Board member and, more particularly, as Chairman, to ensure that public monies appropriated to CPB have been spent properly and accounted for.

For example, during 1984 CPB audited less than 1 percent of its dollars going to public broadcasting stations. Today, about 25 percent have been audited. Further improvement is certainly needed. While this may not have been greeted warmly and enthusiastically in all quarters, for me it constitutes an obligation in the discharge of a public trust.

Chairman Goldwater, Senator Long, and to your colleagues who are not able to be with us, I want you to know that I do have a strongly held belief of maximum citizen participation in our government. It is the bedrock of our system of government. It is why in 1981 I wanted to serve on the Board. It is why I am here before you today. And I have no doubt it, too, motivates the service on the CPB Board of my other distinguished colleagues.

The sole regret I entertain today is recognition, Senator Goldwater, that when the 100th Congress convenes next January, it will do without your services. We in public broadcasting are and will be in your debt for your steadfast support. You will be sorely missed.

Senator, in our hearts we know you are right.

Chairman Goldwater, Senator Long, thank you for your attention. I stand ready to respond to your questions.

Senator GOLDWATER. Mr. Mankiewicz, do you wish to make a statement?

Mr. MANKIEWICZ. I have a short statement, Senator, which I have given to the staff, which I can read or leave standing in the record. It is only three paragraphs.

Senator GOLDWATER. Any way you want to.

Mr. MANKIEWICZ. Well, I will read it if I may.

STATEMENT OF FRANK F. MANKIEWICZ, EXECUTIVE VICE PRESIDENT, GRAY AND COMPANY, WASHINGTON, DC

Mr. MANKIEWICZ. Mr. Chairman, I am pleased to have this opportunity publicly to support the renomination of Ms. Sonia Landau, of New York, as a member of the Board of the Corporation for Public Broadcasting.

From Ms. Landau's nomination in 1981 until I left the Presidency of National Public Radio in mid-1983, during some of which time she served as vice-chairman, I had the opportunity to work closely with her. During all that time we worked very cooperatively, and in the years since, when I have continued closely to observe and be aware of her activities at CPB, I have had great admiration for her work.

She has always been a staunch supporter of public radio, and of the independence and nonpartisanship of programming, both in public radio and public television. She always seemed to me to ex-

emplify the best tradition of non-politicization of the CPB Board and to share my view that public broadcasting should rely as little as possible on Federal funding and seek wherever possible new kinds of private sector financing.

Mr. Chairman, the confirmation by the Senate of Ms. Landau's renomination would, in my opinion, even though we are plainly from different political parties and persuasions, send a strong and needed signal to the whole public broadcasting community that nonpartisanship and public concern remain of major importance.

Senator GOLDWATER. Thank you very much.

Russell.

OPENING STATEMENT BY SENATOR LONG

Senator LONG. Mr. Chairman and nominees, I have a memo here with before me. I walked in the room here and saw no other Democrat and I wondered if somebody had been here and left. I am advised that is not the case.

So I have this memo, though, and I think it would help to highlight the problem which I hope can be solved and resolved satisfactorily to all concerned. Let me just read the first two paragraphs.

"Last March, the terms of five members of the Board of Directors of the Corporation for Public Broadcasting expired. Since Board members may not continue serving once their term has expired, the CPB is now operating with five members, three of whose term expire next March. As of today only two names—Sonia Landau and Kenneth Towery, both Republicans—have been sent to Congress. The statute permits up to six members to be from one political party, which allows four of the five current vacancies to be filled by Republicans.

"Over the past few months the ranking member—" I guess we are talking about Senator Hollings—"has been approached on numerous occasions to hold a hearing on two nominees. His response has been and continues to be that we should not have a hearing until at least a Democratic appointment has been made. While the Chairman has not been willing in the past to override the objections of the ranking member, they have now decided that with so little time remaining in the 99th Congress, they intend to proceed. A subcommittee hearing of the two nominees has been scheduled for Wednesday, the 17th at 10:30 a.m." which is this meeting now.

Mr. Chairman, over on the Finance Committee we have had real problems from time to time defending and maintaining the independence of the International Trade Commission. The State Department wants to dominate that Commission through the White House, and we have passed laws which we have recommended from the committee to Congress to try to guarantee and assure the independence of the Commission. And we have insisted that it be independent, nonpartisan, nonpolitical, just as I think that this Board is going to be.

But the only way that we have been able to achieve that is to insist that, for example, if we thought that the administration was playing politics, that we just not move until the President—for example, if he sent us a Republican, send us an equal number of Democrats or some Democrats to go along with them.

There have been occasions when the only person eligible to be Chairman of that International Trade Commission has been a Democrat, and they just would not appoint the Democrat, and we found it necessary to just hold up and stop everything until they did what they should do.

Now, I would be reluctant to believe that the President is all that partisan and all that political down there. I would like to think—and I do think—that he has all the statesmanship that a President is expected to demonstrate. But I do not say the same thing for some of those staff people down there who often times advise their boss unwisely, I think, to be needlessly partisan and political.

I hope this matter can be resolved, Mr. Chairman. As far as I am concerned, I know of nothing that should stand in the way of these two nominees being confirmed, except this matter to which I have been referring here. And I would hope that we could work this matter out, that they would send us a Democratic nominee to go along with these recommended nominees so that we could move on a nonpartisan and hopefully nonpolitical basis to just send them on through.

I suspect that if efforts are made to move it with just these two Republican nominees that we are going to run into so much difficulty, it just will not happen. And I would hope that it will be resolved in a fashion that reflects credit on both the Corporation as well as on the Congress and this committee, resolving in a proper, nonpartisan way, something that should not be political.

Senator GOLDWATER. Well, I could not agree with you more, Russell. I have been urged to hold this hearing for a long, long time and I told them that I would not hold it until we had a Democratic nominee to fill the Democrat slot.

Well, we had one. But then I think he was occupying a senate seat in Louisiana and his wife took ill and he could not take it. Now we have another man, a Daniel Brenner, but the name has not been sent up. I have urged the White House three different times to make sure we have that name, and we cannot pass on these two people without a quorum. It is quite obvious that you and I do not constitute a quorum. If we could, we would get a hell of a lot more done.

I think we can hear from these people and we would withhold any action until we do have a quorum, and I will have a chance to get word to the President once again to send down a Democrat's name. He knows a few.

Senator LONG. I know he knows some Democrats, and I could help him to find one or two, even maybe some that voted for him for President as far as I am concerned; just so long as their credentials are all right in other respects.

This is the kind of thing that ought to be resolved with statesmanship from all levels. Mr. Chairman, you and I have a great deal in common, even though we come from two different political sides. We have been very much involved in partisan politics from time to time, but we also know that often times the best politics is no politics. In the long run, people come to find you out for what you are, no matter how much you try to deceive them.

I know you want to see an answer and I do, too, where the vacancies are filled with qualified people and we move ahead. To waste all of this time—I can see it now. I have been around here now for 38 years, even before you arrived on the scene, Mr. Chairman, and I can see it now. If somebody is foolish enough to try and force this thing through, all they are going to get is just a lot of conversation out there on the Senate floor.

I am just getting a little too old, Mr. Chairman, to waste my time fooling around with all of that. If they want to fool around with a filibuster, I will just find something else to do while all that talking is going on. My time is more valuable at this point in life than to fool around with that.

Senator GOLDWATER. Well, let me ask you a question. Would you feel more at ease and more representative of your Democratic colleagues if we just postponed this hearing until we could get a Democrat appointed?

Senator LONG. I really think it would be a good idea, Mr. Chairman. As far as I am concerned, whatever you want to do is all right with me, except that I just feel that if you want to get these nominees confirmed—and I have no objection to confirming these nominees—if you want to get them confirmed, we ought to get the administration to get off the dime and send somebody down here from the Democratic side.

Senator GOLDWATER. Ms. Landau, you had something to say?

Ms. LANDAU. Senators, if I might respond, and most particularly to you, Senator Long. I know how appreciative the administration is of the support which you have always given the nominees that the President has nominated, feeling that indeed that was the right of the President.

I have had a great deal of personal interest, obviously, in seeing that my nomination have an opportunity to be heard at a Senate committee and to give the senators in turn an opportunity to question me.

I am hopeful that you will continue with the hearing. CPB is at a very small Board. I honestly do not believe in the CPB situation I do believe that the White House attempted to find a name that would be someone who would want to be on the Board; they did do that; that individual thought he was going to do it; and, as Senator Goldwater correctly explained, was then not able to do it.

I think then they came up with a couple names and were concerned that they be people who were really active, very active Democrats, and would be good names for you.

I do not think that this is any matter that anyone is trying to sit still on, and I am very hopeful, particularly in view of some of the incorrect charges that have been made about me politicizing—which are not accurate—I do hope that indeed I have an opportunity to present the truth here and that perhaps CPB might be the exception to the rule here where you might be able to forgive us.

Senator LONG. I read all this memo, there are things here, and there are a couple of appendages that I have not read, apparently discussing the subject matter which I am sure you would like to respond to. But I am not going to get involved in any of that as far as I am concerned. I am not going to ask any questions about it. As

far as I am concerned, Mr. Chairman, my interrogation of both of the nominees is over.

But I just want to see the matter resolved, I want to see it resolved successfully. And I know how to resolve it. I have been involved in this kind of thing many times, both as a Democratic chairman and as a ranking member.

The way to resolve it is just to send up another nominee, and it is not all that hard to find somebody. My guess is that if they would just take out the files they would have a whole bunch of people interested.

Senator GOLDWATER. I understand there will be one up here within a week. We do have a problem. Mr. Towery has to come all the way from Texas—quite a way.

Would it be agreeable with you if we proceed with the hearings but take no formal action until we have—

Senator LONG. Mr. Chairman, it is agreeable with me to do whatever you want to do. As far as I am concerned, I just explained my position about the matter. If you want to go ahead, by all means.

Senator GOLDWATER. Well, let's proceed with the hearing, with the understanding that there will be no action taken.

All right. Do you have some questions to ask?

Senator LONG. No questions.

Senator GOLDWATER. Mr. Towery, I believe you can come up here, too, now. And, Mr. Mankiewicz, if you would like to move back, you can. Thanks for being here.

Senator LONG. Good to see you up here, Mr. Mankiewciz.

Senator GOLDWATER. Mr. Towery, do you have a statement to make?

[The biographical sketch follows:]

BIOGRAPHICAL SKETCH OF R. KENNETH TOWERY

Address: 706 Barton Blvd., Austin, Texas 78704. Business: Same.

Position to which nominated: Member of Board of Directors CPB. Date of nomination: 4/18/86.

Date of birth: 1/25/23. Place of birth: Monroe County, Mississippi.

Marital status: Married. Full name of spouse: Louise Cook Towery.

Names and ages of children: Roland Kenneth Towery, Jr., 37 years; Alice Ann Gilroy, 31 years.

Education: Institution, Dates attended, Degrees received, Dates of degrees: Luther Burbank High, 1937–39. Southwest Texas Jr. College, 1946–47; 1948–49 A.A.; 1949. Texas A & M College, 1948.[1]

Employment record: List all positions held since college, including the title or description of job, name of employer, location of work and dates of inclusive employment:

1951–56: Cuero Publishing Co., Cuero, Tex., Managing Editor.

1956–63: Newspapers Inc., Austin, Tex., Reporting on Government & Politics.

1963–69: U.S. Senate, Sen. John Tower, Washington, D.C., A.A.

1968–76: U.S. Government U.S.I.A., Washington, D.C., Assistant Director, Deputy Director.

1976–77: University of Texas, Austin, Tx., Assistant to Chancellor.

1977–78: U.S. Senate, Sen. John Tower, Austin, Tex., Systems Office, Adm. Officer.

1/78–11/78: Texans for Tower, Austin, Tex., Campaign Manager.

11/77–5/79: Senator Tower, Austin, Tex, Administrative.

5/79: Sentinel Corp., Austin, Tex., President.

6/81–12/31/85: Towery, Schulle & Assoc., Austin, Tx., Managing Partner.

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[1] Degree plan interrupted due to hospitalization caused from service connected disability.

Nov. 1981–March 26, 1986: Board of Directors, Corporation for Public Broadcasting; Vice-Chairman—Sept. 1984 to Sept. 1985, and Sept. 1985 to March 26, 1986 (i.e., expiration date of Board term; renominated by President).

Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions: Press Secretary and Administrative Assistant to Senator John Tower; Deputy Director, Policy and Plans, U.S.I.A. and Assistant Director, U.S.I.A.; Member of the Board of the Corporation for Public Broadcasting.

STATEMENT OF R. KENNETH TOWERY

Mr. TOWERY. I have no formal statement to make, Mr. Chairman, except to say that I am pleased and honored that the President sent my name forward again, and I would be pleased and honored if the Senate saw fit to confirm my nomination.

Beyond that, I have no prepared formal statement, so I will respond to any questions.

Senator GOLDWATER. Thank you.

This is a question for both of you. In fact, most of them will be that way. Much of the time Congress devotes to public broadcasting concerns funding issues.

Are there other long-term issues affecting public broadcasting that you would like to see Congress focus on?

Ms. LANDAU. Obviously, I think the funding issue is probably the most important, and certainly for the CPB Board. Where else do we go for money besides the Federal dollar, the budget being the way it is.

I think an important question that all of us have to deal with is where are we going in the way of children's programming. This is the first priority of the CPB Board and one which I think merits a lot of attention from all of us.

Everybody pretty much recognizes there is too much television that children are exposed to nowadays. And I think it is up to us to be sure that the children have an opportunity to learn how to deal with ideas, and I think we need to come out with a bit more innovation in the way of public broadcasting programming that is able to keep up with the mindset of the youth today.

So I think, one, in terms of the kind of programming we do; and, two, certainly in terms of alternative financing. That is important.

Mr. TOWERY. Mr. Chairman, I would like to join in that. I think we have made some—I don't know whether we would call it progress or not—we have at least instituted certain changes in terms of priorities there with a very high emphasis placed now upon education, children's programming, things of that nature which I think at least in the long run are going to pay off.

I was a Senate aide back in 1967, I think it was, when the Corporation was set up, and I rememberr the debates and all that went on at that time. If I had my choice of what we ought to do at this point, I think it might be productive to take another, very thorough, look at this whole subject. The laws that govern our operation, as well as a look at whether we are now operating in accord with those guidelines. Too, there have been great changes within the entire field of broadcasting. It might be well for Congress to revisit this subject to see if the original hopes and objectives have been met, and if not, why not.

I sometimes feel that we are at a loss in terms of what we ought to do in certain areas of activity. I go back and read the laws or the statutes relating to them. In fact, I did it just before we came up on this one.

But I am not persuaded that we have the final answer yet in terms of things like advertising on public television, in terms of a lot of other operations that we undertake, but I am not prepared, shall we say, at this moment to recommend any great change in it. I think what we really need is just to run a tight ship down there and keep our policy in line with our statutes. Beyond that, I cannot think of a whole lot more.

Senator GOLDWATER. Ms. Landau, according to press reports, while serving as Chairman of the Board, you sat in on the CPB Program Funds panel review process. If that is true, what was your role in this panel review process?

Ms. LANDAU. Yes, it is true. I did sit in in a meeting of the panel review process. My role was as an observer. I thought that it was a good idea, and frankly I still think it is a good idea.

Board members, the Chairman in particular, are expected to come to the Congress and ask for money. And presently our only method of obtaining information about what is going on in the program fund panels is from the Annual Report by the Program Fund Director.

I was interested in seeing, one, how the panelists acted when they sat down at the meeting. Had they really read the proposals? There are an awful lot of them that come through. And I sat there and I watched the process and I subsequently reported to the Board how I thought it went.

I do not think that being on the Board puts you in adversarial relationship with the panelists nor with the Program Fund Director. And I thought it went very well. The only difficult thing was keeping quiet for the entire day, which I did do. Ron Hall, our Program Fund Director, I notice is here. He might be able to attest to that.

But that was the purpose, Senator, in attending the Program Fund Panel.

Senator GOLDWATER. Do you think that your presence was at the very least intimidating to the panel?

Ms. LANDAU. No, I really do not think it was. There were, I think, at least 15 people there, and these are fairly accomplished people in their individual endeavors, and I do not think it was intimidating. I would welcome any questions you might wish to give Mr. Hall. He is the one who is, after all, the programming czar at CPB, so I would be happy to have him questioned about how he felt it went or reactions he got from panelists if you would like to do that.

But from my view, I do not feel that it was intimidating at all.

Senator GOLDWATER. Ms. Landau, you stated that your chairmanship has not always been tranquil. Some of your opponents suggest that the Board has become more political or partisan under your leadership. How would you respond to that?

Ms. LANDAU. I would say that is not accurate. It has not at all. I think the Board votes, if you were to take a look at the record of

Board votes, it would reflect the fact that our Board has voted quite the contrary, not on political line.

We passed the budget for 1986 unanimously. We passed an affirmative action program for CPB, nine in favor, one abstention. I was not the abstention. We passed electing all of the officers of the Corporation unanimously. We elected the Program Fund Director unanimously. We elected the Annenberg Fund Director unanimously.

I think that almost every vote of substance on our Board has not broken down in any partisan way. No. It just has not been that way at all.

Senator GOLDWATER. I have been receiving quite a bit of mail over the last couple of years, objecting to the fact that some of the larger public stations, particularly in the East, have been using programs that the writer did not feel were in the best interests of the country.

I remember one particular objection about a show concerning Vietnam, that no answer was allowed to be given. Are you aware of those things?

Ms. LANDAU. Yes, Senator, I am.

Senator GOLDWATER. What are you doing about it?

Ms. LANDAU. Nothing.

Senator GOLDWATER. Why can't you do something?

Ms. LANDAU. The way that the CPB Board has delegated programming decisions for CPB's allocated money is through the Program Fund Director. There is an objectivity and balance statute, but that is supposed to be utilized on an issue-by-issue basis. I think that the Board of Directors just has not dealt with it on an issue-to-issue basis, but I am aware of the criticisms of that particular show and others.

Senator GOLDWATER. Well, if this type of thing keeps up—and it has been growing, I don't mind telling you—it could eventually have an effect upon the money that the Federal Government provides for public broadcasting.

Now, I only get that complaint about a few stations. I would not even want to guess as to the percentage, but they are mostly here in the East—New York, Washington, and other big cities.

My advice to you would be to find out what is going on and then make a determination as to whether that is proper or not.

Ms. LANDAU. Senator, I think your advice is excellent and well taken. If you will allow me to comment on it just a bit in terms of the practical way that CPB does operate. I think the Board is often in the position—and you asked me earlier about my politicization, what it had been. I think one of the problems that occurs once you start asking questions, and the questions I have asked have only had to do with the fiduciary responsibility of the Board.

People were not thrilled to hear that I was asking auditing questions. The five major series that CPB funds had never been audited. And I spoke out about that. That does not get you a lot of friends, and that is part of what my bad press has been about, is because everybody tells the story differently.

Can you imagine what would prevail on the CPB Board of Directors as individual members if they decided to talk about this? Several years ago when I first got on the Board, Jeffrey Cowen, who

was a former member of the Board, who was a Democratic appointee, he and I were interested in introducing a resolution where the CPB Board would just merely do and up and down vote on major series to be sure that we could talk about it and give our view as to what we thought.

We were both referred to as Jeffrey was becoming intimidated from the person who represented the Nixon Years and it went on and on. I think one of the problems is, as a director, how do I interpret the responsibility of the Board which I have always thought was to represent the public.

I think many public broadcasters—and I do not say this in an antagonistic sense—but I just think they often feel the role of the Board as to represent the industry, more of a lobbying effort.

So that the questions that you suggest, I think, are ones that we should deal with at a Board meeting. But if you can imagine that a public broadcasting publication headlines "Iron Curtain Falls on CPB" because I sat in on a program fund meeting where they were talking about things and did not say a word, can you imagine what would occur if the Board sat down there and said here are some letters that have been brought to our attention? Are we really looking at these things approriately to meet our responsibility?

I think we need a few more champions with your view of taking a look.

Senator Goldwater: Well, as you know, there are rules that cover what you can use in both radio and television, and when an organization like Accuracy in Media, making a real to-do about this, I think it is incumbent upon you to ascertain—I have been trying to get my staff to give me an opinion. I have not been able to get one. But I think you, as the Chairman, should find out whether there are advantages being taken of this Federal money that is available to present programs that probably could not be presented even over paid stations.

Would you care to comment?

Mr. TOWERY. Senator, I think it is a terribly important point that you raised. The first paragraph of the charter for CPB gets into the policy aspect, where the Senate and the Congress is telling us what to do, essentially in terms of acquiring programs and things like that.

The last part of it, which to me looms very large, but which is sometimes neglected or at least misinterpreted in my view, very aptly points out that all this should be done with strict adherence to objectivity and balance in all programs, in all series of programs. And I interpret this "with strict adherence" to mean that there is some special attention that ought to be placed upon that.

I think that the Congress has told us what we should do in that regard, but I do not see us having, shall we say, the enforcement powers to do anything about it. The very moment that we raise an issue or raise a question that I would take to mean that we are trying to carry out the laws that you write for us and tell us what to do, then we are hit from all quarters.

I remember one of the spokesman for PBS said it was an inappropriate thing for CPB to do; that that was out of our purview. Well, when I read the law, it is within our purview in that you have told us to do this.

Now, how we arrive at it is another problem. How we arrive at fulfilling your wishes and fulfilling the law is what troubles me a great deal, because we get the same static that you have gotten in this regard and it troubles me deeply.

Senator Goldwater: Well, I just hope you will check into that. I don't have long to be around here so the letters can come in and they won't bother me a bit. But it might get some of the Congress upset when it comes to money.

I have no more questions and we cannot act without a quorum. There is no objection on my part to the reappointment of both of you. There is none on the part of Senator Long.

I will call the White House as soon as I get back to my office and tell them to get off their you-know-what and send a Democrat down here. If they don't know one, I know a few.

So, with that, there are no more questions and the meeting will stand adjourned. I thank you both for being here.

[Whereupon, at 11:12 a.m. the hearing was adjourned.]

[The following information was subsequently received for the record:]

QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS OF MS. LANDAU

Question. A primary reason for the existence of CPB is to help insulate public broadcasters from political pressures. The leaders in implementing this policy are the Members of the CPB Board. What do you think about this policy, and how should it be implemented? Should CPB Board Members be concerned with programming shown by public broadcasting stations? Should they be involved with the decision to air a certain program? During your tenure on the Board, were you involved in any way in deciding or did you otherwise influence whether a certain program should be aired, or did you attempt in any way to influence the overall type of programming? (Please be specific in answering these questions.)

Answer. From inception the insulation of public broadcasters from political pressures (or, governmental interference) has been a primary concern.

As the report and recommendations of the Carnegie Commission on Educational Television noted,

"Recognizing areas of special sensitivity, the Commission is persuaded that a nongovernmental institution is necessary to receive and disburse at least part of those funds. The purpose is not to escape scrutiny but to minimize the likelihood that such scrutiny will be directed toward the day-to-day operations of the sensitive program portions of the Public Television system. What we have sought to design is an institution that will represent Public Television, that in behalf of Public Television will receive and disburse federal, state, and local government funds, as well as private funds, and yet *will be free of political interference.* (Emphasis supplied)

"The institution itself, erected to serve the public interest, must be created and sustained in a manner that will permit it to assert the public interest. Toward the stations, too, its relation is a sensitive one, for it must support the stations, in some degree represent them and yet be restrained from control or the appearance of control over them."

Additionally, as the Senate Committee observed in its report (S. Rept. No. 222, 90th Congress, 1st Session, at page 11) on the bill S. 1160:

"Your Committee has heard considerable discussion about the fear of Government control or interference in programming if S. 1160 is enacted. We wish to state in the strongest terms possible that it is our intention that local stations be absolutely free to determine for themselves what they should or should not broadcast. As President Johnson said in his message of February 28:

" 'Noncommerical television and radio in America, even though supported by Federal funds, must be absolutely free from any Federal government interference over programming.' "

This concept is reflected in CPB's enabling statute which notes, in part, the Corporation is authorized to—

"(D) carry out its purposes and functions and engage in its activities in ways that will most effectively assure the maximum freedom of the public telecommunication

entities and systems from interference with, or control of, program content or other activities. (47 U.S.C. 396(g)(1)(D))

Additionally, this same statute provides that the Corporation is prohibited from—

"(B) producing programs, *scheduling programs for dissemination*, or disseminating programs to the public."(Emphasis supplied) (47 U.S.C. 396(g)(3)(B))

Thus, this is not only the policy, it is the law. Its objective is meritorious; its implementation difficult and not always capable of fitting neatly within a specific policy guideline. I make the last observation not to in any way be evasive in answering the question, but rather recognizing and acknowledging the realities that on occasion CPB Broad Members have received entreaties from Members of Congress to continue funding for certain programs, witness, for example, *The Lawmakers*. Therefore, oftentimes, the implementation of this policy is on a case-by-case basis.

In this connection, at the request of the former Chairman of the Board, and while serving as Vice Chairman, I did express my opinion that I felt that CPB should continue to fund *The Lawmakers*. I did so in response to the former Chairman's request, but most important, from a personal conviction that the activities of the Congress should be covered and reported. In like manner, I also expressed support for the hour-long format of *The MacNeil/Lehrer News Hour*.

CPB Board Members should be concerned with programming shown by public broadcasting stations, particularly when such programming is funded by CPB, and bearing in mind CPB's further statutory authority to—

"(A) facilitate the full development of public telecommunications in which programs of high quality, diversity, creativity, excellence, and innovation, which are obtained from diverse sources, will be made available to public telecommunications entities, with strict adherence to objectivity and balance in all programs or series of programs of a controversial nature." (47 U.S.C. 396(g)(1)(A).

However, responding to the third question in this series, CPB should not be involved with the decision to air a certain program. Both by law and legislative history, the Congress has emphasized the autonomy of the local public broadcasting stations to determine what programming should be aired. And as previously noted, by law, CPB is expressly prohibited from "scheduling programs for dissemination."

Finally, during my tenure on the Board I was neither involved in any way in deciding nor did I otherwise influence whether a certain program should be aired, except to the extent, as noted above, with respect to continued CPB funding of *The Lawmakers* (not airing), and the format (not airing) of *The MacNeil/Lehrer News Hour*. I, along with my other colleagues on the CPB Board of Directors, however, did legitimately seek to influence the overall type of programming through formal Board action establishing program priorities for the Program Fund of the Corpporation for Public Broadcasting. In this regard, a copy of the Board Resolution adopted unanimously at its September 12, 1985, meeting is attached for your information.

Before responding to the following specific questions, I should like to preface my answers with the following general observations:

"First, since I maintain neither a telephone log nor a work diary, I must necessarily respond to the best of my knowledge and recollection;

"Second, following the expiration of my Board term on March 26, 1986, some matters, such as correspondence, continued to be addressed to me personally after the expiration date of my term, and since there was neither a Chairman nor a Vice Chairman of the Board to whom I could refer such matters, I did, as a matter of courtesy, respond but without title and noting the expiration of my Board term;

"Third, this is the first occasion since the Public Broadcasting Amendments Act of 1981 repealed the earlier provision that CPB Board Members serve until their successor qualifies; and

"Fourth, inasmuch as the President had submitted my nomination to the Senate and in the expectation that my confirmation process, along with other CPB Board nominees would follow shortly thereafter, I did, at my own expense, try to keep myself currently informed on public broadcasting matters generally and CPB in particular, looking forward to the resumption of my duties as a Member of the CPB Board of Directors."

Question. Your tenure on the CPB Board ended on March 26, 1986.

Maintained an office at CPB?

Answer. No. However, in handling transitional matters, I did have occasion to continue to use when in D.C. on CPB-related transitional matters a small office set aside by CPB as a courtesy to the Chairman of the Board and other Board Members as needed, bearing in mind that this small office was not being used since there was neither a Chairman nor a Vice Chairman. But, I believe that the last occasion I had to use that office space was sometime in late April.

Question. Met with CPB officers or staff to discuss or influence administrative or policy matters, including issues to be submitted to the Board and position on legislation?

Answer. I recall no meetings with CPB officers or staff "to discuss or influence administrative or policy matters." I did continue to serve, however, on the Search Committee for the position of General Counsel and Secretary, the last I recall attending was on April 28, when finalist candidates were interviewed and selected for presentation to the full Board of Directors. And, following this Search Committee meeting, I did confer briefly with the Committee Chairman, Mr. Wm. Lee Hanley, Jr., and CPB's President/CEO who also participated in the Committee meeting. This concluded a previously assumed duty; no final decision was made, that being left up to the full Board of Directors. Also, I recall that this particular meeting coincided with my attendance at the PBS/NAPTS conference to which I had been invited before the expiration of my term on the Board, and for which I paid expenses.

I also recall no meetings "to discuss or influence . . . issues to be submitted to the Board and positions on legislation." However, before the expiration of my Board term, I had been preparing to testify in support of CPB's Fiscal Year 1989 appropriation request before House and Senate Appropriations Subcommittees on Labor, Health and Human Services, and Education. And, in this connection, I had been asked by CPB's President/CEO to attend what was represented as a routine CPB "in-house" briefing on April 21, 1986, in final preparation for the hearings, following which I was to make a decision whether to go forward with appearing on behalf of CPB at the appropriation hearings. However, when I arrived for the scheduled briefing, much to my surprise and contrary to prior practice of an "in house" CPB briefing, it was being held in the CPB Board Room, and in attendance at the meeting were the Presidents (and staff) of NPR, PBS, and NAPTS. It clearly was not an "in-house" CPB briefing. Consequently, after a very brief appearance, I excused myself and did not participate in the meeting. I also decided that under the circumstances I would neither attend nor testify at the April 22 and 23 hearings before the House and Senate Appropriations Subcommittee on Labor, Health and Human Services, and Education, respectively. I therefore did not participate in or attend either appropriations hearing. Rather, CPB respresented by the President/CEO and the Vice President and Treasurer.

Thus, except for these appropriation hearings and the enactment of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272) which the President signed on April 7, 1986, and which contained in section 5001 CPB's authorization for appropriations (because of the Senate's initiative, for which we are grateful), I know of no legislative matters having an immediate and direct effect upon CPB.

Question. Attended meetings with CPB officers or staff or with other public broadcasting representatives that were not open to the public?

Answer. The only meeting which I can recall which might fall within the purview of this question is the April 21, 1986, meeting which I already have noted in my answer to 2b, above.

I also did attend, at my own expense, the CPB Board meeting of June 26-27, 1986, in St. Paul, Minn., which was hosted by American Public Radio (APR).

Again, this was a meeting in which I initiated the arrangements during my tenure as Chairman of the Board, and which as a transitional matter, having been invited by APR, I felt an obligation to complete. CPB staff did, as a courtesy, make my reservations; I reimbursed CPB for my expenses.

Question. Had CPB officers or staff prepare for you any materials (or otherwise used materials prepared by CPB officers or staff), including testimony to be delivered before Congress, speeches, or summaries or minutes from Board meetings?

Answer. CPB staff (viz., the Office of Legislative Affairs) did prepare for me briefing materials and testimony for the April 22 and 23 House and Senate appropriations hearings. But, as noted in my answer to 2b, above, neither were used as a result of my decision not to participate.

CPB staff (viz., the Director of Legislative Affairs) also has assisted me, like other Board nominees, in the preparation of materials in connection with the process following my nomination by the President. This assistance has included such matters as financial disclosure filings with the Office of Government Ethics, the Senate Committee on Commerce, Science, and Transportation, and preparation for the hearing before the Senate Committee on Commerce, Science, and Transportation, including a brief opening statement.

Additionally, in anticipation of the presentation of the Lowell Award to Senator Goldwater (R-AZ) which never took place because of an inability to find an opening

date in the Senator's schedule, draft remarks for the presentation were prepared for me but never used.

Also, on April 10, 1986, I did deliver some impromptu remarks at the children's radio awards program, an invitation having been made and accepted by me before the expiration of my term on the Board of Directors.

Finally, I did continue to be on the mailing list for summaries of Board meetings. I made no formal request for such materials, and presume it was done as a matter of courtesy since my renomination was pending before the Senate.

Question. Discussed with CPB Board Members issues to be presented at Board meetings, policy decisions of CPB, or legislation?

Answer. At various times I have spoken on the telephone to former fellow Board Members concerning the status and progress (or lack thereof) of my nomination and Senate confirmation. During those telephone conversations, I have no doubt but what there may have been occasions when such Board Members noted to me in passing issues then pending before the Board. However, at no time do I recall ever having any occasion to attempt to influence, much less influence, in fact, any such matters then pending before the Board.

Question. Discussed with CPB Board Members whether there should be a study of the type and nature of programming, including whether such programming has a liberal or conservative bias, shown by public broadcasting stations?

Answer. I have not. However, when I was no longer a Member of the Board, this matter was presented and discussed before one of its committees. As I recall, I was in the audience observing the meeting of the CPB Board of Directors on May 16, 1986, along with other members of the general public, when Dr. Lichter, at Mr. Brookhiser's request, made a presentation to the Mission and Goals Committee of the CPB Board of Directors on this subject. This observance as a member of the general public audience, plus the reading of some of the subsequent press reports on the proposal, represents the full extent of my involvement with this matter.

Question. If the answer to any of these questions is "yes", please give a further explanation of why you answered "yes" and please state specifically each instance when you engaged in the activities mentioned in the questions. In addition, please discuss all other activities you engaged in with CPB Board Members, officers, and staff since March 26, 1986.

Answer. As noted in my preface to my answers, I maintain neither a telephone log nor a work diary so I must necessarily respond to this part of the question to the best of my knowledge and recollection.

My principal activities since March 26, 1986, the expiration date of my term as a Member of the CPB Board of Directors, have been concentrated on my nomination and advancing, where possible, my Senate confirmation process. In this connection, I have made calls upon various Senators who serve on the Senate Committee on Commerce, Science, and Transportation, as well as the Committee staff, in an effort to advance my nomination in the Senate confirmation process. I have coordinated these activities with CPB by keeping CPB's Office of Legislative Affairs apprised of my activities in this regard.

I also wish to note that from time to time I have been in contact with CPB's Vice President and Treasurer and his secretary. My contacts with the Vice President and Treasurer generally have been concerning settling my expenses and reimbursements before the expiration of my Board term and while serving as Chairman; with his secretary, to handle transitional correspondence, she having provided me with secretarial assistance while serving as Chairman since no secretarial or clerical help had been assigned by CPB to assist the office of Chairman.

Question. Throughout its history, pubic broadcasting has had to rely heavily on foundation and corporation sponsorship, as well as on funds provided by government. As the channel through which federal government support for public broadcasting runs, the Corporation for Public Broadcasting is in a critical position to advocate the financial needs of all public stations.

It has been the view of this Administration—and several previous Administrations as well—that funding for CPB should be cut. Although this Administration proposed to cut CPB funding in half, Congress has not gone along. As a Republican nominee to the Board for CPB, what role would you play, and what commitment would you make to protect and advocate the budget of CPB within this Administration and successive Administrations?

Answer. At the outset, I believe one must balance any response to this question with CPB's role to insulate public broadcasting from political pressure (please see no. 1, above). One cannot, in my view, pursue one without being mindful of the other.

However, with respect to this question I believe that my actions speak more loudly than words. For example, on a one-on-one basis, I do believe I was instrumental in late 1984, early 1985, in advancing the cause of public broadcasting with the Office of Management and Budget, and that my activities in this regard were instrumental in the issuance of the favorable February 13, 1985, letter from then OMB Director, David A. Stockman, to the CPB President (copy attached), setting forth ever increasing budget figures for CPB for the out years Fiscal Year 1987-Fiscal Year 1990 inclusive, and which figures were supportive of and in consonance with those sought to be authorized by Senators Goldwater and Hollings which were enacted in Public Law 99-272.

Moreover, in 1984 I did appear as a witness before the House and Senate Appropriation Subcommittees on Labor, Health and Human Services, and Education and testified on behalf of CPB's budget request. These, I believe are demonstrable evidence of my commitment.

Question. The Office of Management and Budget has suggested that federal funding for public broadcasting be phased-out by 1992. What is your view of their proposal?

Answer. At a time of severe fiscal constraints and ever increasing demands upon limited Federal dollars, and most particularly as a result of the so-called "Gramm-Rudman-Hollings" Act, I can understand the rationale for such a proposal.

I have not made any public statement in support of it. And, before taking any position on it I certainly would want to have the benefit of any analysis that might be prepared as to its potential impact upon public broadcasting, as well as public broadcasting's ability to counteract any such proposal with alternative financing mechanisms. Unfortunately, inasmuch as my term on the CPB Board of Directors has expired, and my nomination awaits Senate confirmation, I have not been privy to any such analysis and there is little or nothing that I officially can do at this time with respect to it. Moreover, the ultimate decision on this matter resides with the Congress.

Question. To the extent that decreased federal funding would require increased corporate underwriting or foundation support, in specific terms, what additional safeguards would be necessary, if any, to assure that programming and programming content would not be adversely affected?

Answer. This question presupposes that increased corporate underwriting or foundation support would encroach adversely upon public broadcasting programming. I cannot say that this would, in fact, result. And, not being a Member of the Board of Directors, I have not had the opportunity to review any study or analysis of what might result from such increased corporate underwriting or foundation support. But, if such an adverse result is imminent or did occur, I believe that there would necessarily have to be a greater degree of sensitivity to it, and a Board comprised of sufficiently strong and independent members who could resist such possible result by, if need by, taking the ultimate step of declining such support.

Question. Congress has itself expressed great concern about meddling with program content. In fact, that concern led the CPB Board to establish an independent program fund to make program decisions. In light of any concerns that you might have about protections regarding program sponsors, how do you think this independent program fund is working—do you think that the CPB Board should play a greater role in programming decisions?

Answer. Again, any response to this question relates to that posed in question no. 1.

I do believe that the Program Fund with its panel review process is working reasonably well. However, I also personally believe that the Board, to a large extent, simply abdicated whatever role it might have in the process. And, here I do not advocate a return by the Board to making individual programming decisions. But, I do believe that the Board could be better informed about how the Program Fund functions; how the Program Fund distributes CPB funds for programming; how well the Program Fund processes meet the programming priority guidelines adopted by the CPB Board of Directors; and how well the process meets the statutory guidelines for objectivity and balance in all programs or series of programs of a controversial nature. Any such Board discussion or consideration should be, of course, done openly and in public session.

Question. Whether or not you support decreased Federal government support for public broadcasting, assuming such decreases were to occur, what specific suggestions would you make to maintain support?

Answer. Assuming such a decrease in Federal Government support for public broadcasting, I believe that the luxury of "talk" of alternative financing means for public broadcasting will have come to an end. At that juncture, what would be re-

quired would be an all out concerted effort to finding such alternative sources of funding, exploring the full range of such sources, including but not limited to, increased corporate underwriting, increased foundation support, and perhaps even the earlier Carnegie Commission recommendation of a dedicated tax for this purpose on television sets. However, in the final analysis the ultimate decision in such a matter resides with the Congress.

Question. In recent years, and with considerable debate, public TV has moved to expand advertising through extended statements by corporate underwriters. Some think that advertising should be expanded even more and possibly replace all federal funding. What is your view on this matter?

Answer. This is a very controversial and divisive issue within the public broadcasting community itself. The community appears to be divided equally on both sides of the issue with some strongly held views.

Unfortunately, the Temporary Commission on Alternative Financing (TCAF) for public telecommunications and the advertising experiment, both authorized by the Public Broadcasting Amendments Act of 1981, did not serve to lay the issue to rest. As a matter of fact, among its recommendations to the Congress in its report of October 1, 1983, TCAF recommended the following:

"4. Continue the existing prohibition on advertising unless it can be established clearly that: overall benefits to public broadcasting will exceed the cost; and stations that do not choose to carry limited advertising will not share the risk associated with advertising while not receiving direct benefits."

Again, the final resolution of this issue, as with others, resides with the Congress. But, perhaps, as with decisions to air particular programming which the Congress has left with the local stations, this, too, may be one to be considered best left up to the individual stations who have in-depth knowledge of their respective market, subject to the *caveat* that the authority not be so unrestrained as to take the "public" out of public broadcasting.

Question. Regardless of your personal view on this matter, assuming that further reliance on advertising for funds becomes a reality, do you think specific guidelines or limitations are necessary to insulate public television from the excesses of commercial televisions? What would you suggest?

Answer. It is my understanding that the Public Broadcasting Service (PBS), in consultation with its member stations, has established guidelines for "enhanced underwriting" which I further understand have worked reasonably well.

I therefore would suggest that if further reliance on advertising for funds becomes a reality that favorable consideration be given to utilizing this mechanism composed of PBS and its member stations, and which would be in furtherance of the statutory framework established by the Congress, as alluded to in the Carnegie Commission report of "a system-wide process of exerting upward pressure on standards of taste and performance."

Question. On commercial television, corporate sponsorship is affected by ratings but also to some degree on the message and content of the programming. Do you think that expanded advertising would cause public broadcasting to further lessen programming that might go in to controversial public affairs topics as a result?

Answer. Any answer I might provide to this question would be speculative at best. I have not had the opportunity of examining any studies that might exist in this area. I do understand that there have been some press reports alleging that some major corporate underwriters have influenced decisions of program producing stations. I certainly have not been privy to such incidents, and without evidence to support the allegations I would not be inclined to give them credence. I would, however, be sensitive to the possibility of this result coming to pass if it were necessary for public broadcasting to resort to expanded advertising.

Question. Television as a medium has matured dramatically since its beginning. At the time the whole business got going, Congress acted to guarantee that there would be a balance of commercial and public VHF stations.

Recently, some have proposed that the FCC should allow so-called station swaps, so that commercial UHF owners could swap with public VHF stations. Advocates of this position point out that the money generated by such a swap could provide a substantial endowment of funds for some stations. Opponents argue that this would be akin to selling-off the national parks.

What is your view of the station swap, issue, and as a CPB Board member what position would you argue before the FCC?

Answer. My view on the station swap issue is reflected in the Resolution adopted unanimously by the CPB Board of Directors at its March 1, 1985, meeting (copy attached). And, this would be the position I would argue before the FCC.

Question. With regard to the various funding problems that might be faced by public television—federal budget cuts or a phase-out of federal funding or reliance on expanded advertising to make up budget shortfalls—would you advocate station swaps in any of these circumstances as a method to maintain funding for public stations?

Answer. I believe my position is, as reflected in my answer above, viz., I support CPB Board's position on this matter.

Question. Regardless of whether you might advocate station swaps as a way to generate funds for some stations, what do you think would be the impact on public television throughout the country? Wouldn't this help just a few stations and leave the rest to starve?

Answer. I have seen no study or analysis as to what the impact might be on public television throughout the country. I therefore can neither affirm nor refute the conclusion in the second part of this question. Rather, I can only make reference to my answer to 5 a, above, and the Resolution adopted unanimously by the CPB Board of Directors on March 1, 1985.

Question. Concern about the availability and source of funding for public broadcasting is often expressed in terms of how increased reliance on corporate underwriting might affect the choice and content of programming. Likewise, the intent behind the formation of CPB in 1967 was to provide a buffer from the political process that provides public broadcasting with its financial support.

Given the Administration's position on CPB funding, and as a Republican nominee for a second term as a CPB Board Member, to what degree do you feel the political process is pressuring programming decisions in public broadcasting?

Answer. I personally have no knowledge of any evidence indicating the degree, if there be any at all, that the political process is pressuring programming decisions in public broadcasting. In my experience, whenever it has manifested itself, it has been in the form of Congressional support for the continued funding by CPB of a particular program, witness the *Lawmakers*, and that most often it has emanated from both sides of the aisle. As a Board Member, I certainly have no objection to having a Member communicate his or her views to me on any matter since I presume this to be part of the process of a Member representing constituent interest. It is quite another matter when it comes to exercising my vote as a Member of the Board of Directors which I strongly feel must reflect the "public interest".

Question. What is your opinion of the proper role for a CPB Board Member to play in ensuring the independence of CPB from political influence and control? How does this compare with your view of how a CPB Board Member should insulate public broadcasting from the interest of corporate underwriters?

Answer. With respect to the first part of this question, this, too, relates to question no. 1 and my answer thereto.

In the final analysis, I believe that the proper role for a CPB Board Member in this regard is to be mindful of the guiding principle which I annunciated in my opening statement before the Senate Committee on Commerce, Science, and Transportation—that has been to represent and to serve the public interest to the best of my ability mindful of our Congressional mandate and accountability.

This same principle, I believe, is responsive to the second part of this question, which I also have addressed with respect to the question above.

NOMINATION OF DALE D. MYERS TO BE DEPUTY ADMINISTRATOR, NASA

MONDAY, SEPTEMBER 22, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 2:30 p.m., in room SR-253, Senate Russell Office Building, Hon. Slade Gorton presiding.

Staff members assigned to this hearing: Macky Ayers and Pete Perkins, professional staff members; and Marty Kress, minority staff counsel.

OPENING STATEMENT BY SENATOR GORTON

Senator GORTON. Welcome to this hearing of the Committee on Commerce, Science, and Transportation as it considers the nomination of Mr. Dale Myers to become Deputy Administrator of NASA.

At no other time in the history of our space program has NASA been tested as it is today. The task of reconstituting our space launch capability is a long undertaking, and the uncertainties associated with this task are understandably affecting the planning for many of NASA's other programs.

The task is further exacerbated by a confusing budget puzzle. Now, more than ever, NASA needs competent, assertive leadership to guide it through these difficult times.

NASA Administrator Jim Fletcher has left no room for doubt as to the magnitude of the job before him, nor has he left any room for doubt as to how much he needs to fill the soon-to-be vacant position of Deputy Administrator.

Dr. Fletcher's and our nation's space program are fortunate to have a nominee of the ability and character of Dale Myers to this position.

Mr. Myers' long involvement in the aerospace field and especially his service as NASA's Associate Administrator for manned space flight from 1970 to 1974 make him well qualified for the demanding responsibilities that the Deputy Administrator must tackle.

Mr. Myers, surely you are aware of the job that awaits you on your confirmation. Restoring the orbiter to flight readiness and determining its future role are activities that will profoundly shape the future of our space program. Also, maintaining a vibrant space science and applications program will challenge our ability to optimize the returns of the significantly fewer science missions that will be launched during the next several years.

Never before has the growing challenge of other nations' space programs been more apparent than it is today. No longer can our aeronautics and space program rest on its laurels. We must prove ourselves all over again to the rest of the world.

Nonetheless, as great as the job is, it is not insurmountable, and I am pleased that you have been nominated to step into the breach.

Your qualifications speak for themselves. That you have consented to come back to Washington under these unusually adverse conditions is a test to your dedication and commitment.

We will look forward to hearing from you today.

But first, we are delighted to hear from your sponsor who is present, Senator Pete Wilson.

STATEMENT OF HON. PETE WILSON, U.S. SENATOR FROM CALIFORNIA

Senator WILSON. Thank you very much, Mr. Chairman. You have framed the challenge awaiting Mr. Myers with your usual clarity and succinctness. I can only say that as great as that challenge is, I think he comes to it fully qualified. In fact, as I review this outstanding record, it seems to me he is almost over-qualified.

I will not recite the record to you. It is before you.

You commented on the tour of duty in which he served as the Associate Administrator for Manned Space Flight. But I think that what preceded that and what has followed it gives us additional reason to be particularly confident about Mr. Myers' ability to come to this job, as difficult as it is in this difficult time, and meet it head-on and make a great success of the specific challenges awaiting him.

He began as a graduate of a very fine school of aeronautical engineering and quickly went to work at then-North American, and has graduated through a distinguished career to the point where he has held varied jobs that seem almost as though they had been constructed to prepare him for today's responsibility.

His last 5 years, ending in 1984, as President and Chief Operating Officer of Jacobs Engineering, were, I think, a fitting capstone. Jacobs Engineering, as you know, Mr. Chairman, is one of the great engineering firms in the nation. But prior to that, he had been in public service, not just in the capacity at NASA but also as an Under Secretary of the Department of Energy.

He has been a Vice President of Rockwell International.

He has, in short, earned the distinctions that have been heaped upon him.

I will take a moment to share a few of them with you.

In addition to the degree he holds from the University of Washington, he has been given an honorary doctorate from Whitworth College. He is a Fellow of any number of professional engineering organizations and scientific organizations, a Fellow of AIAA and AAS. He has been awarded the NASA Certificate of Appreciation in connection with his work on the Apollo 8 project, the NASA Public Service Award for Apollo 11 in 1971, the NASA Distinguished Service Medal for the Apollo Program; and, in 1974, he received the NASA Distinguished Service Medal for the all-manned space flight.

It is obvious to anyone reading this record in a cursory fashion that he has already earned great distinction in a very relevant way.

He also thereafter won the Department of Energy's Distinguished Service Medal in 1979.

Mr. Myers is, in short, a man whose background has prepared him singularly for the responsibility that he has and who has discharged all of his obligations in a way that has earned him these awards and great distinction.

In addition to that, I must say that he enjoys within the greater Los Angeles community an enviable reputation for both a very high degree of integrity and also a very high degree of civic interest.

So, it is not surprising to me that, having achieved the success that he has, both in public and in private service, he has decided once again to come to public service and add to the laurels, because it seems it is ingrained in him the habit of public service and of performing it in a very distinguished fashion.

I will not take more times, Mr. Chairman.

I will only say to you that it is a truly unusual privilege for me to come before this body. I have done so many times, but seldom, I think, if ever, have I presented anybody with more impeccable credentials.

Senator GORTON. Thank you, Senator Wilson.

We are happy to have you stay and participate in the hearing or to go on to deal with your other priorities, as you see fit.

Senator WILSON. So great is my confidence in the nominee and in the Chair that I think I am going to take advantage of your invitation to excuse myself.

Senator GORTON. Senator Riegle.

OPENING STATEMENT BY SENATOR RIEGLE

Senator RIEGLE. Thank you, Mr. Chairman.

Let me thank also our colleague from California.

Let me say at the outset that I support your nomination Mr. Myers. I want to work along with Senator Gorton to see that you are confirmed as quickly as possible.

I also am pleased with your selection. You are certainly no stranger to NASA with your long and successful history of the past and service that we appreciate in retrospect, just as we will appreciate the service that you give now.

I think, as you well know, that NASA is in an entirely different situation than where it was during the days of Apollo and your previous service.

It seems to me that this is a time that requires extraordinary leadership and effort. It means, I think, maybe developing some new skills that might not have been needed in the same fashion before. I think we are finding that today.

I think that the new leadership at NASA today is finding that this is a much tougher job than it might have looked prior to stepping into those responsibilities, and I think you will find the same thing.

One thing that I hope you will be prepared to talk about today, about which I will ask you at the appropriate time, is this. The New York Times today, as you know, I am sure, ran a feature story on the front page having to do with the question of whether the O-rings were a problem that was known about and a solution was in the works, and whether or not it was moved along as it properly should have been. Obviously, you are not responsible for those decisions.

But I think you will be assuming a responsibility with respect to the candor and the integrity of the responses that are given by the agency, whether it is to the Rogers Commission, when they were doing their work, or whether it is to our committee now.

So, I would be interested in what thoughts you have on that because I think that at this stage of the game in NASA, we have to have absolute integrity in terms of the fullness of our comments and what we say about critical events, past and present.

So, sometimes the truth is not pleasant, but telling anything less than all of the truth I think is just not workable for NASA.

I do not suggest that you would do that. But it seems to me that in this very critical number two position in the agency, I would like to hear from you that you intend to see that the leadership that you can give will include full disclosure on all the matters of great consequence so that we do not have to worry about wringing out the answers; that the answers that we are seeking will be given readily and fully.

Thank you.

Senator Hollings has another commitment and can not make it to this hearing but I have his statement he would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY SENATOR HOLLINGS

Mr. Chairman, this is a most difficult period for NASA, and I am pleased that Dr. Fletcher and the President have gone out and found a veteran quarterback to fill the position of Deputy Administrator of NASA.

Dale Myers is no stranger to Washington, NASA, or Capitol Hill; and I feel that he is eminently qualified to be the Deputy Administrator of NASA. His prior experience as Associate Administrator of NASA for Manned Space Flight and as Undersecretary of DOE have well prepared him for the challenges that lie ahead. With the addition of Mr. Myers to the NASA management team, I believe it would be safe to say the NASA management team is finally in place. Now that the team is in place, let's get the space program back on track and the shuttle back into orbit.

Mr. Chairman, I strongly endorse Mr. Myers for the position of Deputy Administrator of NASA. I think that he is the right person for the job and that he brings the necessary skills and experience to the management table. I also believe that Mr. Myers is well aware of the fact that in trying to correct the short-term problems, you can't forget to plant the seedcorn of the future. I, for one, am particularly pleased that Mr. Myers has recognized the need to attract new blood to the agency and to groom the next generation of mid-level managers. I can assure Mr. Myers that I will actively work with him in these areas and that I am open to any suggestions that he might have, and I hope he will be open to mine.

I also would like to note that Mr. Myers, as was the case with Dr. Fletcher, is making a considerable sacrifice to come back to the Federal government at this point in his career. I want him to know that I am most appreciative of this gesture and that NASA and the Nation will greatly benefit from his presence in the agency.

Mr. Chairman, I look forward to working with Mr. Myers to put NASA and the space program back on track, and I support his nomination as Deputy Administrtor of NASA.

Senator GORTON. Do you have an opening statement?

Mr. MYERS. I have a brief opening statement, Mr. Chairman.

Senator GORTON. Please go ahead with it. Then we will ask you some questions.

[The biographical sketch follows:]

BIOGRAPHICAL SKETCH OF DALE D. MYERS

Address: P.O. Box 2547, Leucadia, CA 92024. Business: P.O. Box 2455, Leucadia, CA 92024.

Position to which nominated: Depty Administrator, NASA.

Date of birth: January 8, 1922. Place of birth: Kansas City, MO.

Marital status: Married. Full name of spouse: Majorie Ellen Williams Myers.

Names and ages of children: Janet, 41; Barbara, 38.

Education: Institution, Dates attended, Degrees received, Dates of degrees: University of Washington, 1940–1943, B.S. Aero. Engrg., 1943; Whitworth College, Honorary PhD., 1970.

Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment:

1943–1964: North American Aviation, Downey, CA, Aerodynamicist to V.P. Prog. Mgr.

1964–1969: North American Rockwell, Downey, CA, V.P. Program Manager, Apollo Command and Service Modul.

1970–1974: NASA, Washington, DC, Assoc. Adm, for Manned Space Flight.

1974–1977: Rockwell International, El Segundo, CA, Pres., Aircraft Grp., Rockwell Intl.

1977–1979: Dept. of Energy, Washington, DC, Undersecty D.O.E.

1979–1984: Jacobs Engineering Group, Inc., Pasadena, CA, President, Engrg & Construction.

1984: Aerospace Consultant, Leucadia, CA, Aerospace Consultant.

Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions:

1948–1952: NACA Subcommittee on Stability & Control.

1970–1974: Associate Administrator for Manned Space Flight, NASA.

1984: Advisor to NASA, Atlas Centaur Failure Analysis.

1985–1986: NASA Advisory Council.

1977–1979: Undersecretary, Dept. of Energy.

STATEMENT OF DALE D. MYERS

Mr. MYERS. Mr. Chairman, distinguished members of the committee, I am really very pleased to appear here today.

When I was asked by Dr. Fletcher to come to Washington as Deputy Administrator, I really strongly resisted. But, when I was called by President Reagan, I realized that the President is as fully committed to wanting this country to continue to be first in space as I am.

I just could not think of any more good excuses. He is a very persuasive man.

I am honored to be nominated by the President for the position of Deputy Administrator of NASA.

If confirmed, I will assure you that I would enter the job with no reservations, fully committed and dedicated to continuing NASA's preeminence in space and regaining the confidence of this committee, the Congress, the American people and the world in NASA's ability to carry out exciting and important space missions safely and reliably.

Dr. Fletcher and I have worked together in NASA from 1971 to 1974. We have developed, I think, a very good team relationship. I have great respect for his management ability and his vision, and I

believe he wanted me for this job because he respects my ability to lead people in large, technically complex endeavors.

We discussed the work to be done in NASA, and we have agreed that it is a very tough job. We have also agreed in our background in industry that he will be the "Chairman and CEO, Chief Executive Officer," and I will be the "Chief Operating Officer." As such, I will be responsible for programs and institutional issues. I will work across all aspects of NASA with respect to space transportation, space science, aeronautics and space technology, and the space station, and, of course, the institutional infrastructure that supports that.

I will, as a first priority, make sure that everything is being done that needs to be done to make the shuttle fly as soon as possible and as safely as possible. This encompasses the technical and management issues that NASA endorses from the Rogers Commission Report. It will also involve regeneration of the spirit, the dedication, and the outstanding technical capability of NASA and their contractors that you and I have seen so often in the past.

NASA is understandably going through a low-point with the loss of the brave astronauts of *Challenger*. Dr. Fletcher, with the support of this committee, has already started the recovery of that spirit.

I believe I can help, and I want to help.

I would be happy to answer any questions.

Senator GORTON. Mr. Myers, I have a series of 15 questions which cover just about every important element of NASA's mission. Under the circumstances, I have decided simply to submit those questions to you in writing. I believe you know what most of them are.

We would appreciate your written responses to them.

But Senator Riegle has already adverted to what is clearly the principal subject of any hearing today which has anything to do at all with NASA, and that is the story in this morning's New York Times, going much deeper into the history of the O-rings than anything which has been a matter of major public interest.

It is, of course, correct to say that no mention of this set of circumstances was included in the Rogers Report. It is also accurate to say, of course, that in the appendices to the Rogers Report and the transcripts of testimony which were gathered by the Rogers Committee are the sources of all of this information.

We knew 24 hours after the *Challenger* had been destroyed that it was almost certainly a failure of the O-rings. We have, since then, I think it perhaps accurate to say, learned about the failure of those O-rings and about what was being done with respect to them almost in a way analogous to the Chinese drip torture. Every week or every month brings us new information on that subject.

You may be in as good or better position than anyone else connected with NASA at the present time, as soon as you are confirmed, to help reconstruct that history and to help solve the problem. This is because your own service in NASA was long enough ago not to have been involved in any of these decisions at all.

On the assumption that you have read that story and on the assumption that you have enough technical knowledge even to read

between the lines, I would like to hear your comments, your initial response to it.

It is obvious that the function of NASA when it was created was to engage in a crash program, at that point under President Kennedy's instructions, to reach the moon, and that it has operated as an almost totally autonomous agency with the mission foremost in its consciousness, a mission or group of missions which it has, by and large, carried out now with great aplomb and with great success.

I suppose we could respond to this story in the New York Times by saying that instantly, when we found that there was a problem with those O-rings, we should have stopped the space program until that problem had been completely solved.

On the other hand, I suppose we could say it is a little bit like improving the automatic transmission system or brake system of automobiles. You have a need; you produce to the best of your ability to produce at a given time, while you are constantly looking for improvements and phasing in those improvements.

Manufacturing space vehicles and launching them into space, however, is not quite like manufacturing automobiles and putting them onto the road.

So, I would, right now, be particularly interested in your initial commentary on what this illustrates, not so much about the technical problems relating to the O-rings, but the method by which decisions are made in NASA. Maybe, if you are willing to share it with us, tell us of some of what must have been obvious risks and perhaps as significant a set of risks which attended earlier space programs, but which did not result in disaster.

Mr. MYERS. Mr. Chairman, I have not been associated with the shuttle program since 1974, so it has been a long time.

But I have been associated with the Apollo program and the elements of the space program before that, out into the flight areas.

We were flying Apollos at one every two months. There were times in that program when failures occurred on either a launched vehicle or a test program getting ready to launch. And we had a requirement that each of those failures would be tracked down and corrected before the launch—if at all possible.

But we also had a requirement that if the failures were of Criticality One (that same value statement as applied to these O-rings), we would all understand the problem and understand it to the point where we could make the judgment whether we should take the risk for the launch.

We had cases like that in Apollo. I had to make personal decisions as to the readiness to launch a vehicle, even though there might have been some problem that we understood but could not correct for that launch.

Of course, what it means is that we had to be much more careful about that particular element during the launch and had to understand as best we could how to protect that particular area.

If I were to try to project that background into the situation we have here, it sounds like there must have been a review which concluded that the difficulties that were occurring, even with the light-weight structures of the solid, were not of a magnitude that

would require not launching, that would require shutting down the operation.

But, on the other hand, I do not see, within the article, at least, any indications that special hands-on loving care was given to that area prior to the launch. I think that is the difference that I am feeling, without knowledge, of course, of what went on inside NASA during this period.

If an item is a Criticality One and is to be waivered for launch, it is incumbent on the whole organization to understand exactly what the problems are and to do everything you can to protect that element from the environment that it would be associated with.

I have to find that out, if I am confirmed, when I get into this area. It seems to me that some element of that extreme red flag that is associated with Criticality One issues was not attended to as completely as I would hope it would be.

Senator GORTON. When you faced Criticality One items in the Apollo program and were faced with a decision whether or not to launch, even though to a certain real degree those Criticality One items had not been totally resolved, how high did the responsibility for launch go?

Mr. MYERS. It went to the Administrator.

Senator GORTON. It went to the Administrator?

Mr. MYERS. Yes.

Senator GORTON. Did it involve the astronauts who were to fly the vehicle?

Mr. MYERS. Oh, yes. Our FRR included the astronauts. They were fully aware of any of these issues that developed.

I will have to back up a little.

I believe there were cases where some Criticality One items, where we felt very confident of where we stood on waiver, did not go to the Administrator. But they always went to the Deputy Administrator at that time.

Senator GORTON. But these were ones which you had really felt you had solved.

Mr. MYERS. Yes—where there were some real risks that we felt that we contained and that we were able to launch, but that we wanted to be sure that all the intelligent eyes of the agency were involved.

There were many times when we would bring people in from outside to look at that particular area, consultants from the aerospace companies, specialists. I remember one in a stress corrosion problem that was developing on one of the tie-down legs of the Saturn I–C booster, the big booster, the first stage. We brought in experts from several different aerospace companies to review that stress corrosion problem before we went forward with the launch.

Senator GORTON. I take it that if you are confirmed as Deputy Administrator, you will, in fact, demand to know of any problems which even approach the seriousness of the O-ring problem.

Mr. MYERS. Absolutely.

Jim and I certainly agree that the first priority in all these elements is to be sure that these communications systems are working clearly to absorb all of the technical intelligence that NASA has in preparing for the launches of the shuttle. This means, of course, developing back in my mind the process and the procedures and in

the minds of the people of NASA the need to always report upward issues that they have any question on.

Part of this really becomes an automatic system, where any failure comes through for review and analysis. But part of it is still a matter of recognizing the need to communicate.

We must build that, I think. There seem to be some gaps in that communications system that we just have to close.

Senator GORTON. Thank you.

Senator Riegle.

Senator RIEGLE. Thank you, Mr. Chairman.

Have you had a chance to read the Rogers Commission Report?

Mr. MYERS. Yes, I have.

Senator RIEGLE. Can you give me a sense of your feeling, when you finished it, in terms of the impact it had on you as a person with a long history in NASA?

Mr. MYERS. It was an excellent report. The team was a good team. They did what they set out to do. I believe that NASA's response to that report indicated that NASA also believes it is an excellent report because in every case, there has been a strong endorsement of the recommendations of the commission.

I was concerned about the results of the report from the standpoint of what newspapers call "NASA-bashing."

I think, in spite of the disaster that occurred and what appears to be a real breakdown in communications, the recovery is going to be difficult for NASA.

I think one of my jobs is going to be to build back up the spirit, the dedication, the commitment, the sort of gung-ho attitude that we need, and, of course, along with that the cross-checks and balances that we always developed in the manned space flight program to be sure that while they have that gung-ho, let's-go-try-it attitude, there is also a check and balance to make sure that it is a safe action that is taken. I think that that is a part of the problem.

I think there have been some good things already done by Jim Fletcher. As I mentioned, we have brought some extremely good people into the organization, with J. Bob Thompson coming as the Director of Marshall, with George Rodney, as head of our new Safety Committee, as Associate Administrator for Safety, Reliability, and Quality Assurance, and with others that we have brought into the organization. I think the choice of General McCartney for the Kennedy Space Center is an excellent choice.

We are bringing top people into the organization. We are bringing good people into our programs. We need to do a lot more of that. We need, of course, to bring bright, young people and middle managers into the operation.

This is where I think you are going to be helping us, because the recognition of the long-range goals of NASA and the importance of the Space Station to those long-range goals will be the kind of thing that will stimulate the interest in these bright young people to join NASA. They can't make it with money; but they can sure make it with the great feeling of accomplishment they get by joining the NASA organization.

Senator RIEGLE. Well, we share that desire with you. This committee feels very strongly about wanting to rebuild NASA to the greatest strength that it can attain.

But to do that, we sort of have to understand where we are coming from and what we have been through here. I think there are still some great concerns that we have and that I think the public properly has.

Let me ask you a slightly different question in relationship to the Commission report.

As you read it, as a person with the kind of intimate background that you had previous with NASA, what were the things that may have surprised and disturbed you the most from the reconstruction of events that preceded that accident?

Mr. MYERS. Well, I think there was a breakdown in communications. I think that the system that I left, when I left in 1974, involved checks and balances in the system which seem to have become soft.

The argument in the report that repetitive launches dulled the fire, the intensity involved in each launch and that there may have been a feeling that if it worked once, it will work again—that has really bothered me. It is clear to me that, even in a lower rate of launch of the shuttle, it will be much higher than that we had in Apollo.

Therefore, the systems of communication probably are going to have to be somewhat different than for Apollo. But they have to accomplish the same thing. They have to accomplish the broad understanding of each of the problems for each of the launches so that we have the safety that we are looking for.

I do not have a specific answer to that. But it seems that out of that report, the thing that concerned me the most was a feeling that things were getting routine and operational devices have a habit of getting routine. The shuttle is still one of the most powerful energy devices the world has ever seen, and you cannot treat it like an airplane taking off routinely from an airport.

Senator RIEGLE. Now, you are an old pro in this business. You have been through it. You have had to make those fine-line decisions, where people's lives were on the line and millions of dollars worth of equipment was on the line and so forth.

As I have gone through the reconstruction of what happened here, one of the things that has been the hardest for me to understand and to accept was the fact that we had a situation here where we were launching in the coldest temperatures that we had ever attempted to launch, and that everybody up and down the chain of command, whether somebody tapped them on the shoulder or not, presumably would be aware of something as fundamental as that—namely, that it was very cold and that that was a new factor. It was a different factor than we have had to deal with before; that there were previous indications that when we had had this burn-through or this blow-by in the O-rings, it had occurred when the temperatures were lower; and, in fact, that there was this long-standing O-ring problem, which apparently was well known by many people. You do not have to read today's New York Times story but will know from other information we have had that this was a problem that was known and that top level meetings had been held on it, and so forth.

So, on one level I can see why a communication breakdown, where somebody perhaps should have talked to somebody else and

they didn't, can be one area where an accident like this can be set into motion.

Another aspect is, however, that I guess I expect people at the top of the command to be there for a reason, to be at the top because they are the best we can find, and that they have the ability to integrate and keep track of a lot of information—not that they can sort of fine-tune every single aspect, but that big questions, like low temperatures, are not something that somebody has to point out to them, or a big problem like a long-time problem with O-rings is not something I would think somebody would have to remind you of.

So, there is still a question in my mind as to why those kinds of critical linkages would not be made in the mind of the top managers who are putting everything at risk—peoples' lives at risk, the equipment at risk, the whole program at risk.

Were you left with any feeling of concern in that area?

Mr. MYERS. Yes, Senator Riegle. I feel, as you do, about that. The top people in the organization are the ones that should be fully aware of the issues associated with Criticality One items. If it is a Criticality One item, they should be fully aware of it.

That is why I say that there is a communication element of this that is one of the first things I am going to be looking at if I am confirmed.

I believe that it is those small things, it is these intimate details of a program of this nature that make it work or not work. They are the kinds of things that you must continue to work on to make sure that the whole group of people, that everybody involved—contractors and NASA personnel—must understand this process of communication to the top and top level decisions in those critical areas.

I will say that unfortunately I am not in the position to have been inside NASA to understand these problems. I have only read the Rogers Commission Report and what I have read in the newspapers. But those indicate to me a gap in communications.

Senator RIEGLE. I don't want to spend the whole rest of my time on this because there is something else that I want to move to in a moment. But there are two other points on it that I would like to discuss with you before we move off it.

We have all had to live with it, since the accident and the aftermath of the accident, trying to piece together what happened and so forth. I am still very deeply struck by the events the night before the launch, when the engineering team from Thiokol, the prime contractor on the booster, felt that it was unsafe to launch. There was this very heated discussion that went on over a long period of time and the engineering group refused to sign off on the safety of the launch, and NASA had to appeal the decision up the line to the headquarters of Thiokol in Utah. It was only after a rather tortured procedure and an unusual one, and one that apparently never had happened that way before, that there was an override of the decision of the engineers on the site who felt it was too dangerous to go.

Apparently that was a unanimous decision or judgment on their part, to say that it ought not to go. Apparently the NASA people

found that hard to accept, and so the effort was made to test that decision and it was overridden.

Do you recall in your time at NASA ever a situation that is the parallel of that one, where the team on the site, responsible for certifying that something was safe to be used, would have had the judgment that it was unsafe when they had argued vigorously that it was unsafe in turn overruled by others in some other location?

Mr. MYERS. No. I do not remember that.

I have been on both sides of the operation. I was the Program Manager for the Command and Service Modules for Apollo, up through Apollo 11, and then I was head of Manned Space Flight starting in 1970.

It was invariably the case that the contractor had to prove it was ready to go, not to prove that it should not go. If the contractor said it was not ready to go and the NASA counterpart did not agree, it was another one of those elements that went right to the top.

I do not remember ever making a recommendation not to go that was not accepted by NASA when I was in industry. I do not remember ever going if I had a recommendation from industry not to go when I was head of Manned Space Flight.

Senator RIEGLE. Your recollection squares with that of everybody else that we have been able to talk to before this committee, and that is that we cannot find another situation like this one. This seems to have been a violation of the procedure that had always been followed and that had been followed in the past. Obviously, in this case, it led to a tragic consequence.

The second part that I would like to ask with respect to that is this. You previously had a professional relationship with Rockwell, years ago, in another capacity. I was struck later, too, by the fact that we had two contractors that were recommending against launch because of weather conditions—Morton Thiokol the night before, and then, in the Rogers Commission testimony, the next day, the Rockwell Corporation which was concerned about ice conditions and so forth on the pad. It also recommended against launch and that, also, in effect was overridden.

Does the fact that we had this happen in the same launch with two different contractors in two different areas mean anything?

Mr. MYERS. I am not really familiar with the case of Rockwell. I read it in the newspapers, but I do not know any of the details of it. I don't know at what level the concern of launch was or whether it was really a specific recommendation not to launch. But it was the same tone, certainly. I think you are going to find, if I am confirmed, that there are going to be some changes in that attitude on the part of the NASA people.

Senator RIEGLE. That is why we need to get you confirmed.

You mentioned that back in the days of the Apollo launches, on matters of this kind, they really got, to use your phrase, "tender loving care." The top management team would really hover over Criticality One issues. If there were something that really looked threatening, that went all the way to the top and everybody really put their mind to it and nothing slipped by.

Am I right in my understanding that that is the way the procedure was during the Apollo program?

Mr. MYERS. Yes, that was the procedure. I would say that 99 percent of the time, nothing slipped by. I won't ever say 100 percent because, who knows, there might have been something that did. But the process was there. Everybody knew that was the way it was to work.

Certainly I had plenty to keep me busy on problems associated with each launch of the Apollo on Criticality One issues that we satisfactorily took care of and did not have a problem with any of those that we approved.

Senator RIEGLE. I think that is significant, because that is the way the system was designed to work. It did work that way, and I think probably had a great deal to do with the successful history of launches in very complex circumstances—to take craft to the moon and back, to take landers to the surface of the moon and back, and so forth.

It seems to me that somewhere along the line that system either changed or broke down because it did not happen in this way in the *Challenger* launch.

Mr. MYERS. Senator, I want to add a point. The reason I told you about this problem in the way we handled the Criticality One issues was going to lead to a point. There were times when we had a design change that could not be incorporated into the next Apollo. It might be possible to incorporate the changes two Apollos further along. And we knew that we had that same issue perhaps in two launches before we got to the fix.

So, that concept of dealing with Criticality One issues, getting a design fixed, getting it underway, and bringing it in in what I call a change point, a change that may be farther down the line, is a concept that is certainly used in production of engines for commercial airplanes and everything that I have ever been associated with.

The difference is how you treat the thing once it is called a Criticality One. It becomes an orphan in the system that must be watched very, very carefully, so that you can contain it within its environment until the launch comes on the fix.

I think that was the concept that was used by Marshall for going ahead with these larger forgings, but apparently did not come out in communication to the committee here or even to the public.

Senator RIEGLE. That is the thing that even today is so hard to understand. The problem was known about. High level meetings had been held. A fix was in the works. As you say, there is an orderly way in which that is brought in in your normal course of events.

But then, the particular circumstances of a given launch would obviously have a tremendous bearing on whether or not you had unusual launch conditions that would interdict the very problem that you were struggling to fix. The problem here with these extraordinarily low temperatures impacting as they would on this O-ring problem, it still just seems so incomprehensible as to how the system could fail so completely that these critical facts would not be connected in time to prevent that flight and to save this tragedy from happening.

It is just awfully hard to accept that kind of scale of breakdown when the problems seem to have been well-known.

Mr. MYERS. There have, of course, been some changes in the people involved in the system. I am just delighted to find J.R. Thompson back as Director of Marshall. I had worked with him during the Apollo days, and he is just one of the right kind of people to be able to manage and bring into the Marshall Space Flight Center the kind of discipline and communications that we need. So there are good things happening.

Senator RIEGLE. I understand that.

Mr. MYERS. We have a way to go, but we are on our way.

Senator RIEGLE. I appreciate your point.

I am just going to raise one other thing at this time. I appreciate the fact that there have been some major personnel changes, that a number of people who were central to the decisions that were made prior to the *Challenger* launch have been replaced, and I think properly so.

Dr. Fletcher committed to us that he would make those changes and be unflinching about it, and he has done so. I applaud him for it, and I applaud your attitude in saying that you feel strongly, as well, that if it is people or if it is systems, whatever it takes, it has to be corrected, and those changes are going to be made.

I take you at your word on that.

Mr. MYERS. Absolutely. It will be done.

Senator RIEGLE. Let me ask you just one other thing. This sort of bridges over into another area.

I must say that I think all of us are having a hard time analyzing the impact of the fact that I am about to mention.

It is this.

In the days since your involvement with the Apollo program, the defense space program has really come into being and has grown at an enormous rate of speed. The defense space program today is roughly a $15.5 billion program on an annual basis, which, in a sense, dwarfs the spending that we are able to put together for NASA directly.

I must tell you that I am concerned about the fact that I am not sure we are doing as much for NASA as we ought to be. I was involved here to try to make sure that we provided enough money for replacement of the *Challenger* that we lost. I think we need to stay on track, as you have said, with the space station and other things. Here the Soviets have their station up, it is working, and they have cosmonauts up there. I am concerned about the fact that I think we are somewhat behind.

We have to do what we can to close that gap.

But, as I watch this enormous growth in the defense space program, I cannot help but feel that it has a direct impact on NASA, and I think, in a sense, that as one program becomes very robust and very well funded and is moving out in a lot of different directions, there is a kind of reciprocal connection to NASA where I think NASA is finding it harder as an institution within the government and our budget system and so forth to get the money that it needs, to get the emphasis that it needs, to get the priority attention that it needs.

I am wondering—and I would like you to give me as frank an answer as you feel you can—I am wondering if we are not running the risk that we may see some impairment of NASA's ability to get

back on its feet and get its work done simply because of the tremendous, almost competitive, growth that you see in the defense space program?

Mr. MYERS. Well, certainly the space program for the defense department has grown dramatically since I was here last. It was on its way.

We were here, working closely with DOD in the development of the requirements for the space shuttle, to support both our exploration and science programs and the military program. We were looking for a shuttle that could support as much of the space transportation activity as possible.

The defense program has grown dramatically, but it has grown out of technologies some of which were developed by NASA, some of which were developed independently.

I did not feel any competition in my role as head of Manned Space Flight with the military, when I worked very closely with them up through 1974. I do not see that as a direct competition now. It has to be certainly recognized as another one of the big issues in the balance of budgets. I understand that problem completely.

But the NASA programs, as far as I can see, are not directly competitive. They have a different thrust in terms of development of technology for civilian use—new science, new understanding, exploration of space, things that do not compete with the military programs.

Dollar wise, our budgets have gone way down in the percentage of the total budget. Even since I was here, when the budgets were dropping off for the Apollo program, we still had a very robust program because we had a lot of hardware left from Apollo. We were able to have boosters that could boost Skylab, and get us into our initial Space Station program.

But the budgets were dramatically dropping, and, even then, the budgets that I had as an average through that time period were twice as high as the budget that NASA has today, in 1974 dollars. I was, frankly, very surprised and a little concerned about that, as to my ability to be successful in this job.

I think Dr. Fletcher and I intend to do everything we can to get a long-range goal established for NASA that will build with it the elements of space technology and the elements of excitement that it takes to rebuild NASA. I think we are going to have to come to you with programs that are overwhelmingly important and exciting, that will help you to convince the rest of the Congress that we need an additional budget.

I don't know when that will be. I do not know that it is going to happen. But if it does not happen, I think we are going to have to reestablish the Space Act of 1958. I think we would have to conclude that we are not going to be preeminent in space.

Senator RIEGLE. May I ask for a commitment from you, then, if you feel prepared to give it? It is this.

I would like to ask you to make a pledge today that if you find that NASA is not getting the budget support that it needs to do the thing that it is charged with doing, to do them adequately and to do them safely, I would like your pledge that you come to us and you tell us that and be very direct about it and not get pressured

into biting your tongue because of somebody in the budget department or what have you. That is the first part of the pledge.

And I say that because I don't want us kidding ourselves. I want to know what we need to do and I want us to be prepared to do it. Then I want us, as you say, to at least say to the American people that we are changing our goal structure because we are not prepared to pay for it.

The second part of the pledge is this. If at any point in this new assignment you feel that there is tremendous growth in the defense space program which is impinging on NASA and is having the effect of NASA sort of being squeezed down below what it needs to be able to function properly, we need to know that, and we need to know it from somebody in the agency who has the strength and the independence of mind and stature to be able to tell us that. If we do not get that, then we can veer off course here, and I think if we do, it will be a shame for everybody.

I hope you will not find it hard to make that kind of pledge because I sort of gather that this is how you think anyway. But it would be helpful for us to know and it would be helpful for me to know that if you see that happening, you will come forward and say so.

Mr. MYERS. Well, Senator Riegle, I am a very candid guy. You are going to hear from me if I feel that NASA programs are in difficulty.

On the other hand, I am a part of the team over there, of the Republican administration, and with the deficit problems that we have, I am sure that I am always going to be straining with the issues of balancing the realism of the deficits of the time with the issues of our future space program.

You are going to find that I am going to be fighting very hard within the administration to increase the budgets. Those budgets are not going to be increased just to increase budgets, though. They are going to be increased for important, exciting, high technology science and exploration for this country. And I will get to you on those subjects as they develop.

Senator RIEGLE. And if you try to win that fight and you lose it and you sense that the things you really feel need to be done cannot be done because we are not prepared to spend the money for them, I take it, then, that you will not come in here and tell us that we are going to be able to do all these things if, in fact, the resources are not there. You are not going to mislead us on that count?

Mr. MYERS. No, I sure am not. That is a promise. I certainly will not.

I think the telephone call I had from the President of the United States certainly indicated his commitment to a continuing strong NASA program.

I do not know that I have a direct mandate from him, but you are going to see me in there kicking hard in OMB to get our programs going.

Jim Fletcher is the kind of guy who thinks in terms of long-term, long-range activities. We are in the process of understanding and seeing how the Paine Commission Report fits to the programs that

we have. It is so obvious to me that the shuttle and Space Station are an element of that that can bridge into the Paine activity.

I am not saying that that is the direction we will go, as a nation, but I think the building blocks are there. We have to find a way to get another one of these major challenges to the technology of this country, so that we can be back on the cutting edge and develop the new technologies that we developed during the Apollo Program.

I think we have that opportunity with the Space Station, and, by the way, I want to add we had it in the Aeronautics and Space Technology programs. I think those are elements that are extremely important to set the stage for any of these long-term programs that we have in the future.

They have really taken a back seat for the last few years. We do not have any new rocket engines being developed. We do not have any of the elements that were underway when I was here in 1974. Most of that space technology activity dried up because of the need to put every penny into the shuttle program.

We hurt our science program at the same time. I think now, with this long no-launch situation that we have, we have an extremely difficult program for the science community. That is an infrastructure that took 15 years to build, and we can destroy it in two years if we do not do something to keep that excitement and stimulated interest by the science community up to the time we get the shuttle going again.

You are going to find me working hard in that area, too, to try to find ways to keep that very important part of the nation's science community stimulated and interested in the space program and ready to go when we are ready to go again with the shuttle.

Senator RIEGLE. I appreciate what you have said and I look forward to working with you very much.

I am pleased that you are coming back into public service in this capacity.

I thank you, Mr. Chairman, for allowing me the time to pursue those questions.

Senator GORTON. Thank you.

Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

I have been listening with interest to the line of questioning by my colleague from Michigan.

Mr. Myers, I, too, welcome you here today. I am glad you are coming back into government.

In looking over your dossier, I noticed a series of political contributions. While you contribute to organizations that I have never contributed to, nevertheless, I enthusiastically support you for this nomination because certainly there is no room here for politics.

The key statement in a paper that I have in front of me is that you were selected by Dr. Fletcher as his personal choice and that you have a reputation for being a tough manager.

I strongly supported Dr. Fletcher's return to try to straighten out the space program, on which there is no question that it is in somewhat disarray. We need some tough managers.

You come with those credentials, and I am glad you are back.

If you run into anyone who sees a little bit differently than you do politically, then ask them to make contributions to those organizations that I can contribute to so that I will be relieved somewhat of those financial obligations.

I was saying that jokingly, of course. I compliment you for putting your money where your mouth is on politics.

I also notice that you said in answer to Senator Riegle's question that you would be candid in your remarks and reports back to this committee, and come and report to us if things are amiss. But you pointed out that you are part of the Republican team over there, and in that regard you indicated something about your being very much concerned about the deficit and what is happening there, as are all of us on this Committee. I would like to note that all three of us here today serve on the Budget Committee, which has a lot of responsibility in that area.

I hope that, as part of that Republican team over there, you will be more effective than I think that team has been thus far in getting the deficit under control.

So we welcome members with your thought processes into that team to help us to arrest, I think, something that is basically out of control today, to say nothing about the skyrocketing deficit.

As a businessman, I am sure that you are also very much concerned that the deficit has risen and the national debt has more than doubled in the last six years, which I think is a pretty alarming situation.

But, to get down to the matter at hand here, let me ask you a few questions.

I assume that you agree with me, as a member of the Armed Services Committee, that we are looking to NASA to get things going and on track once again for all of the program that it has been involved in. But I would hope, as I pursued to some extent with Dr. Fletcher, that while domestic uses, communications are a tremendous part of our future in this country, I believe that we are going to have to come up front and recognize, are we not, that for a considerable extent, the expenditures for NASA and the direction of NASA in the immediate future is going to necessarily have to focus to a considerable extent on the military missions of NASA? Given the fact that, as you know, we need very desperately, some additional defense-related satellites up there now that are not currently where they should be, would you not agree that an important part of NASA's getting back on track and getting the proper shots off is to have to concentrate possibly more on the military application than has generally been perceived in the press releases and propaganda coming out of NASA over the years?

Mr. MYERS. Senator Exon, I have worked with the Defense Department directly in a contract relationship, I worked with them when I was at NASA, and I think you will find that NASA certainly meets its commitments as far as the policies of the nation relative to launching these vehicles.

It is very important. It is a key element of what the shuttle is all about. We will do what needs to be done as far as launching those military payloads. Now, having said that, I know that NASA is right now in the midst of trying to develop the first manifest. It may not be the final one, but it is a manifest for planning as to

what launches will come when in their early launches of the shuttle.

One of the vehicles that is one of the most exciting payloads that NASA has ever developed is the Hubble Space Telescope.

Senator EXON. It is what? I'm sorry, I didn't hear you.

Mr. MYERS. The Hubble Space Telescope. It is a telescope that goes up above the atmosphere and goes into space and looks out farther than any telescope has ever looked before, and in a spectrum of light that has never been tried before.

It is probably the most exciting science project that NASA has had in years. It was to be launched this summer. With the shuttle disaster, it is now delayed. I don't know how long. But one of the elements of putting together that manifest that I hope can be accommodated in the overall United States policies relative to who gets first launches, I hope early in that launch manifest we are able to launch the Hubbard Space Telescope. Now, I am not saying that it should be first, or even second.

Senator EXON. But it is a priority item, is that it?

Mr. MYERS. It is a very high priority item. I believe it is an important one to continue to stimulate the science community in the activities of NASA, I think one which I would hope would be seriously considered as an early launch.

Senator EXON. I have one or two more questions that I would like to ask, Mr. Chairman.

Mr. Myers, let me go a little bit into some other things that I have on my mind. Many of the questions have already been covered with regard to the shuttle, which we think is very important.

Of course, I am sure you would agree that non-manned flights of NASA are something that we will continue to look at.

Specifically, in this regard, there has been a lot of unrest in the commercial community lately, trying to make a judgment as to whether or not they should contract with other countries with regard to employing them or contracting with them to launch satellites, given the difficulties that we are currently experiencing.

Would it be your recommendation that, given the priorities that we are likely to be confronted with in NASA in the immediate months, and perhaps years to come, that some of those people who feel it is particularly of interest to them from a business venture standpoint, to go ahead and contract with other countries, if they think that is in their interest? Or, should they hold and wait and not contract with other countries to get commercial satellites up?

Mr. MYERS. That is a difficult area, Senator. Commercial satellite makers are capable of making their own decisions there. It is a free enterprise issue.

I wish we could hold them and wait and launch them on the shuttle. One of the difficulties with new payloads for the shuttle is that you have to develop new software and new holding fixtures for those satellites. We have done that for those satellites.

So, some of the least expensive launches we could have for the shuttle are with communications satellites. On the other hand, commercial ventures being what they are, with the return on investment that are involved for these big, expensive satellites, they have great pressures to launch early. If they are going to and make a deal with the Chinese to go on the Long March, they are recog-

nizing that they are taking some risks, because the Long March is a new, not many flights kind of booster. So they must be willing to take those risks if they take a ride on that launch vehicle.

If they go with Ariane, Ariane has increased the price on their vehicles. They have not yet developed their big booster, but it is coming.

So I think there is a great opportunity for American industry to develop independently the expendible launch vehicles that could be used for some of those launches.

Unfortunately, their timing is about the same as the shuttle timing. It takes them so long to develop, to get the tooling back in business and get those vehicles built, you are talking about a period from here until 1989, or so, before American launch vehicles could come into place.

Senator EXON. So, I guess what you are saying is let the free enterprise system prevail.

Mr. MYERS. That's really where I stand right now.

Senator EXON. Let them prevail and let them make their own decisions. I guess what you are saying is if you have to get something up between now and 1989 that is not considered by NASA as a high priority item for this nation, if they can shop somewhere else to get the job done and wish to take their risks, that is their business.

Mr. MYERS. Yes, and we will be working as closely as we can with the commercial launch vehicle people to try to encourage them and to help them in any way we can to get them into business. That is the policy of the administration. I see that as a responsibility of NASA, to help them.

Senator EXON. For the last couple of years, according to your dossier, you have been on the NASA Advisory Councils. You are there now, I presume. Is that correct?

Mr. MYERS. Assuming I am confirmed, I will immediately drop off that panel, first.

On the other hand, then I will be in a position of being the representative of NASA that they report to.

Dan Fink is the head of that committee, and I called him up the other day to tell him, "Boss, I'm going to be your boss, maybe."

Senator EXON. So you are going to be quite closely associated with that organization?

Mr. MYERS. I will continue to be very closely associated with them.

Senator EXON. Let me get your background and experience, and maybe some of your feelings on the question I am about to ask would very likely go back to your preceding years in the Department of Energy and so forth and your long years of expertise.

How much involvement has NASA had, at least that you were aware of as a member of the Advisory Council, with regard to the Strategic Defense Initiative that we are now spending a great deal of time on in the Armed Services Committee?

Mr. MYERS. Very little.

Senator EXON. Very little?

Mr. MYERS. Yes.

I am aware of a study on future launch vehicles, where there was a mix of what we call mission models, where you put together

what you guess might be the launches that will be required each year for the next ten or 15 years. In those studies, we included all of the science payloads of NASA, all of the space technology payloads, everything in the exploration activities, the launches to the Space Station, commercial satellites at that time. Of course, that was before this new issue of commercial satellites came up and we had from the DOD their space missions and a guess as to what might occur in SDI. That is the only time I hear the name "SDI 'in our activity.

Now, of course, as I understand it, there are some shuttle launches for tests, research and development tests for SDI. There are I am sure other elements of our technologies that are picked up by the SDI to be used. But it is a relatively minor part of NASA's activity.

Senator EXON. In that regard, with your background, your education, your experience, do you have any words that you might care to impart to us now on how you view the practicality of SDI?

Mr. MYERS. I guess I look at it as a research program that needs to be carried out. Like many research programs, we are really not in a position yet to say whether it will have direct payout.

I guess what will come out of it are elements that are important to the defense of the nation. Whether it becomes a big, impenetrable system or not is a long, long way off.

Senator EXON. Mr. Myers, I find that, other than political affiliation, we also agree completely. You could not have just articulated better the position of this Senator in your answer to my question.

I think SDI is an important research and development project, but I think there are a lot of questions as to whether or not it is going to play the role in the future that it was originally sold to play.

I have one last question, Mr. Chairman, which ties in somewhat with that question.

With regard to your experience and background on NASA or otherwise, have you had any input whatsoever?

If not, what are your views with regard to the transatmospheric super vehicle transportation system that the President outlined in his address to the Congress last year, where we are going to have a two hour flight, for example, to Japan and back? This is one more research and development program that is being given some consideration now. It has all kinds of implications, I suggest, as to whether or not it is defeating toward SDI, or maybe will prove that SDI is unworkable.

What about that super transport? Has there been input and advice from NASA to the administration on that?

Do you have any opinions on the practicality of us pursuing such a research and development project?

Mr. MYERS. I think the aerospace plane or the Orient Express or the transatmospheric vehicle—and I am not sure which it is now—a vehicle which can fly from a runway directly into space, is a tremendously important research and development activity. It has all of the cutting edge technologies that NASA is so good at doing, and all of the elements that would apply to either commercial or military programs in the future.

It is so much like the old NACA, which was the old National Advisory Committee on Aeronautics, the predecessor of NASA, which built beautiful wind tunnels and facilities and was able to support industry on really important high technology moves forward.

I see that resurgence in that kind of interest in NASA, and I see it as the kind of thing that could really get us a step ahead in commercial programs and in applications to military programs. I think it is the sort of thing that makes this country great.

I think that it is not something that I can say, "It will work" or it will work by a certain date, I cannot say that.

But I can say that the research is very important for this country to work on as an element that could lead to a major advance in space.

Senator EXON. Mr. Myers, I thank you very much for your candid answers to my questions. I appreciate it.

I simply say this. I started out by saying that you seemed to agree with my philosophy on getting expenditures under control, and then when I listened to your, I found that I basically agree with most of your thoughts on what we should be doing. But I keep asking myself where are we going to get the money?

Mr. MYERS. I do, too.

Senator EXON. But I suppose, as a good administrator and as a good bureaucrat, you will simply say to Senator Gorton and me and to the other Senators who have to make those decisions, "You have to make the choices." That is a very difficult choice that we have.

I thank you for being here. I know that you will make a great Deputy Director and I look forward to supporting you.

Mr. MYERS. Thank you very much, Senator.

Senator GORTON. I want to thank you also, Mr. Myers, and remind you that there are written questions on other subjects which we will ask you to answer.

With that, we will adjourn.

[Whereupon, at 3:44, p.m, the committee adjourned.]

[The following information was subsequently received for the record:]

PREHEARING QUESTIONS OF SENATOR GORTON AND THE ANSWERS

Question 1. What are your top priorities at NASA, once you have been confirmed, and what do you see as issues at NASA that warrant the most attention?

Answer 1. Once I have been confirmed, my top priority will be to assist in realizing the agency's top priorities:

1. Get the shuttle back to flying in a safe and timely manner
2. Help develop on overall National Goal for the Civilian Space Program
3. Initiate procurement of the Space Station
4. Obtain a replacement orbiter
5. Revitalize the NASA people and institution

To help accomplish these objectives I will help establish an effective, stable organization at NASA Headquarters which can:

a. Re-unify the diverse efforts of the various centers
b. Implement recommendations of the Rogers Commission
c. Foster an environment which will further crystalize our long range plans

Question 2. Certainly, the single most important task facing NASA is reconstruction of our space launch capability. While there is unanimous agreement that the shuttle should be restored to flight readiness, how we establish a mixed fleet of shuttles and ELVs is an issue that still needs to be resolved.

What is your view of the role of ELVs in our space program, and to what extent should NASA rely on ELV's?

Answer 2. Clearly the Nation has moved away from a space launch policy of primary reliance on the space shuttle. DOD plans to procure additional Titan IV's and plans to develop a Medium Launch Vehicle (MLV)

Dr. Fletcher has recently requested the Office of Space Flight to undertake an agency-wide study of the mixed-fleet concept for NASA payloads. Initial results from this study should be available early next year. I will be involved.

Question 3. On August 15, the Administration announced a policy which would preclude the shuttle from launching private communications satellites, once the shuttle honors some of its existing launch services agreements.

To what extent will this policy guarantee a viable U.S. commercial ELV industry that can compete effectively with present and anticipated launch systems?

Answer 3. Given the nature of the private sector, there is nothing NASA can do to guarantee the development of a private sector ELV production and launching industry. In the wake of the Challenger accident and the President's most recent directive, a substantial backlog of payloads will exist. This backlog should provide launch companies with a sufficient market for initial operation and I understand NASA has been working towards the orderly development of an emerging ELV industry through its participation in the Commercial Space Working Group of the Economic Policy Council.

Question 4. One popular criticism of our space program is that it lacks specific long-range goals, much as we had with the Appollo program when you were originally at NASA. Now, however, we have the report of the National Commission on Space, which establishes an agenda for our space program for the next twenty years and beyond.

Generally, what is your opinion of the Commission's goals to revisit the Moon and to establish a human response presence on Mars—to what extent are these goals and their enabling technologies feasible and appropriate?

Answer 4. I think Tom Paine and the National Commission on Space did an excellent job of setting out long-range goals for the American space program. Throughout the history of the program, we have always had our eye on the long-range future as we did our day-to-day jobs and planned the next steps. The important programs that we now have underway such as the shuttle, the Space Station and the Space Telescope, are all valuable in their own right, but they are also stepping stones to the future. I am sure that mankind will return to the Moon and will visit Mars and I think it is very important that the United States have a leadership role in these ventures. One of the tasks I want to undertake at NASA is to assure that these long-range goals and our near and mid-term planning activities are closely related.

Question 5. Even though the Department of Defense is planning to expand its own ELV capability, there remains continued concern about the relative and absolute use of the Shuttle system by DOD.

What are your thoughts on the growing DOD space program and its relationship with NASA—is the distinction between the two programs becoming more blurred, or do you believe that the two programs can effectively and efficiently maintain their persepective roles and identities?

Answer 5. Our charter is to explore space and to develop peaceful uses of outer space. This charter clearly charges us with the lead in research and development of those non-defense related areas of the utilization of space. We have had no conflict with DOD in pursuing those goals in the past and do not expect any in the future *as long as the resources allocated to us to pursue our charter are adequate.* The shuttle was designed to accommodate payloads from science, commercial, international and military sources. Our support to military payloads will continue; even as the military develop an alternate space launch capability using expendable launch vehicles.

I don't think the two programs are becoming blurred. I think the growth of the DOD space program just proves the worth of space for both Military and Civilian programs.

Question 6. There are growing concerns about the effect that the Challenger accident has had and will continue to have on NASA's space science and applications programs, as well as on the university programs which support these space science and applications programs. For instance, between FY 1986 and 1992, NASA was planning to launch approximately 50 shuttle equivalent flights for space science and applications missions. Now, due to the Challenger accident, NASA is estimating the number of shuttle equivalent missions to drop to 15 to 20. In the face of this markedly reduced space science activity, what can NASA do to maintain a healthy space agenda and university space science infrastructure over the next several years?

Answer 6. Once the manifest is established for the shuttle, I will be able to work with Dr. Edelson on the issues of maintaining a strong science and applications program so vital to the United States.

Question 7. NASA's Advisory Council has recently concluded that "the Nation has allowed its space technology base to erode, leaving it with little technological capability to move out in new directions should the need arise." The National Commission On Space reached, in effect, the same conclusion.

Do you agree with this assessment, and, if so, what can we do to restore this space technology base to a sufficient level?

Answer 7. As you know, I have been away from the agency for a number of years now, and do not have a basis from which to form a precise impression of the health of the agency's technology base. However, based on the external reports of the experts who have reviewed the agency's programs in depth and my perception of the agency from my position in industry, I would have to conclude that this is a critical concern and an area that is crucial to the revitalization of the agency's space program. In fact, I view the revitalization of the technology arm of NASA as an important element of the recovery of the space program. It is crucial for the Nation's space program to be able to push the frontiers of the technology forward and apply the latest technologies to imaginative and important space missions of the next decade and beyond.

I know the National Commission on Space recommended a threefold increase in the agency's space technology program, and I also believe that an increase is necessary.

Question 8. A widely-held perception is that the space programs of other nations, such as Japan, China, and the European Space Agency, are growing rapidly and are narrowing the once-significant gap between our program and their respective programs. Do you believe that the days of our once-unchallenged superiority in aeronautics and space are over, or do we have a chance to reestablish once again our clear dominance in these fields?

Answer 8. Just as the American space program had developed over the years, it is only natural that foreign countries have increased their capabilities as well. However, the United States is still at the forefront of new technological developments. In order to maintain U.S. leadership, it is important that we continue to support all aspects of the NASA program: aeronautics and space technology development, space science and applications research; space transportation; and development of the Space Station, as well as encouragement of greater investment in space on the part of the private sector.

Question 9. Likewise, the Soviet Union has deployed its Mir space station, in conjunction with its Salyut space station; has made significant progress on a broad front of space transportation technologies; and has an ambitious program of future space science missions. What is your sense of the comparative capabilities of the Soviet space program with those of our own, and how the two space programs will compare ten to fifteen years from now? To what extent should we consider cooperation with the Soviet Union in space endeavors?

Answer 9. As you have noted, the Soviet Union is our strongest competitor and is, in many ways, ahead of us in building an extended presence in space. If the Soviet shuttle flies in 1988, as some have predicted, they will already have a distinct lead over us in one respect—they not only will have a shuttle but also a permanent space station to fly it to.

Mir is not as large or as advanced as the Space Station the United States is planning to complete by 1994 with international cooperation, but it is in orbit now, while ours is eight years away.

The Soviets are ahead of us in long-duration manned space flight, having clocked some 4,000 days in space compared with 1,587 for American astronauts. They have broadened and expanded their impressive planetary exploration program, and are pursuing a new long-range program of Mars exploration which could eventually lead to a manned expedition to Mars.

To sum up, the Soviet's sustained, step-by-step approach to expanded use of space has largely closed the gap that we opened during the Apollo era. To what extent that we can know their plans, we see no signs of any slackening in their efforts. If anything, and particularly in the field of manned space flight, they are stepping up the pace. The Mir space station is clearly designed for significant expansion with the addition of scientific modules around its central docking hub. Meanwhile, the Soviets have been practicing ambitious construction techniques for building large structures in space, and it is not hard to envision a very much more capable Soviet manned space station by the mid-1990s than what exists today.

Where we will be by that time, depends, of course, on decisions that we will be making in the years immediately ahead.

Finally, on the subject of cooperation, the President strongly endorsed cooperating with the Soviets in the peaceful use of space where such cooperation is of mutual benefit. To that end, I understand that the United States proposed last July that a new US-USSR space agreement should be concluded to facilitate such cooperation.

Question 10. One of the most demanding tasks of the Space Station Program will be to establish a legal and managerial regime that not only reflects the role of the United States as the leader in the Program but also retains for the international participants a significant role in the planning and decision-making.

What are your thoughts on this aspect of the Space Station Program—how can we ensure that international participation is a constructive, not a fractious, element of the Space Station Program?

Answer 10. Our international partners in the Space Station definition program, Canada, ESA, and Japan, are each considering significant investments in the development program. In return for a commitment to these investments, they are each expecting to have a role, both in the planning and decision-making process for the development program and also in the management and operation of Space Station once it is operational. NASA is currently negotiating agreements with each of our partners covering the development and operation of the Space Station. Currently, NASA is discussing multilateral management schemes to oversee operations and utilization through which decisions would be taken by censensus. I believe our position in the negotiations should be that NASA should, because of its majority-partner status, chair such multilateral groups and take the responsibility for making decisions where consensus was unachievable.

Question 11. The commercial development and use of space is an initiative that has captured the attention of the aerospace community; yet results are understandably slow to materialize, and the dislocation of our space launch capability will further delay the progress of space commercialization.

What do you believe is the true potential of space commercialization, and in what field do you anticipate the greatest amount of growth?

What should NASA and the Federal Government do to foster and encourage space commercialization?

Answer 11. Although I have not been close to these programs, it appears to me that the potential for space commerce is enormous. From basic research which aids terrestrial research in biomedical technology to actual production in space, microgravity and the other unique attributes of space hold great promise for industrial ventures. However, enthusiasm for commercial development of space must be tempered by the unique environment facing those who wish to enter this arena. The basic research necessary to stimulate private ventures has not been done. Once this research has been completed, then a sizeable capital investment is needed; the cost of getting into space as well as developing spacecraft is high. Insurance costs are increasing and availability is uncertain. Raising capital for commercial space ventures prior to the achievement of research results in an arduous task. Proprietary rights are also a problem.

It is difficult to project what the winners in terms of disciplines will be in this effort. However, most agree that materials processing holds the greatest potential. Because of the very high value of pharmaceuticals, electrophoresis and protein crystallography are promising. Other research into the creation of gallium arsenide crystals and other electronic materials which are very high speed replacements for silicon in computer chips are being actively pursued by a number of entities.

I plan to review the issues of commercialization as a priority item once confirmed, but it seems clear that NASA must stimulate these efforts through research and development, through making it easier to carry out experiments, and through technology disseminations.

Question 12. For fiscal year 1986, NASA's Aeronautical Research and Technology funding was $337.3 million, out of a total agency appropriation of almost $7.3 billion.

Do you believe that Aeronautical Research and Technology funding of this amount reflects an appropriate level of priority within NASA and can adequately support our commercial aviation industry, even though our competitive margin in aeronautical technology and sales has narrowed considerably over the years?

Answer 12. Yes, within a constrained NASA budget, the aeronautics program has competed effectively with other agency priorities and has remained strong and productive over the past several years. The results of the NASA program can be found in all of the latest civil and military aircraft, and the research results rapidly

emerging from NASA laboratories will have profound significance for the future of aviation.

NASA must continue to conduct an aggressive long-range R&T program that concentrates on emerging technologies with potential for order-of-magnitude gains and exploits key vehicle opportunities. Pioneering new technology holds the greatest promises for securing lasting U.S. competitiveness in the world market.

NASA has played a major role in establishing and maintaining U.S. leadership in aeronautics. I have a strong commitment to continuing this central role in providing a timely, proven and broad technology base for U.S. industry application. Given the vast opportunities and associated payoff of NASA's long-range research, I am sure that the aeronautics program will continue to compete effectively for resources even in a constrained fiscal environment.

Question 13. The Administration's Fiscal Year 1987 budget request includes a new start for the National Aerospace Plane Program.

How do you view such a vehicle, if developed, in the context of NASA's future space transportation system?

Answer 13. I fully support the objectives of the National Aerospace Plane Program. It is a program which combines the ideas and resources of NASA, DOD and industry to focus on a research and technology program with a very high potential payoff. We should do the technology development program and then decide if or how to produce an operational vehicle. This is the type of R&D program which has made the United States a great technological success.

NASA's space transportation requirements in the post-shuttle era are in two major categories: 1) heavy lift and cargo and 2) personnel and/or high priority payloads. The timeframe for decisions on the next generation of space transportation systems is in the mid-1990's. The joint DOD/NASA National Aerospace Plane (NASP) program is structured to provide validated NASP technologies as an option to vertical launch, rocket-powered systems in that decision timeframe. An operational Aerospace Plane, capable of rapid, assured, and lower cost access to space—could satisfy the second requirement and is conceivable by the turn of the century. Further, it offers the potential for flexibility of a variety of launch recovery sites, and autonomy from ground control while in flight.

Question 14. There is understandable concern about the ability of NASA to attract and retain the best of the scientists and engineers coming out of our universities and the private sector, especially given the pay disparity between the government and the private sector.

What can be done to ensure that there is an appropriate infusion of talent into NASA?

Answer 14. The first and most important is to ensure that there is an appropriate infusion of talent into NASA is to restore the image of the agency as an excellent place to work because of the significance of our mission, our top quality facilities and the opportunities provided individuals to play a meaningful role in the U.S. space program. In addition to this effort, we must continue to promote adoption of a more simplified personnel system which facilitates movement, among academia, the private sector and the Federal Government and enables us to encourage and reward more productive and creative employees. We must also continue to focus on making Federal salaries an benefits for scientists and engineers more comparable to those of the private sector. In summary, we must provide challenge and prestige, but we must also recognize and reward our employees if we are to attract and retain the best.

Question 15. Quality Control—With this year's accidents of the Challenger and the Titan and Delta ELV's, the quesiton has been raised as to whether there has been a reduction in quality control or quality assurance in the aerospace industry and at NASA. What are your thoughts on this issue, and what effect do you think NASA's new Office of Safety, Reliability, and Quality Assurance will have on the Agency's functions?

Answer 15. Although I understand there was a reduction in quality control personnel, there was also a major reduction in hardware built in house. The question is whether there was a disproportional reduction.

I believe the new office of SR & QA is a good management move. It will work only if the administrator and I support it fully. We intend to do that.

Question 16. Do you believe that your previous assocation with a major NASA customer will influence in any way any procurement evaluation or decision made at NASA during your upcoming service?

Do you intend to participate in procurement evaluations or decisions that materially affect any contractors with whom you were previously associated?

Answer 16. I worked for Rockwell up to the end of 1969 in Space Programs. That was over 15 years ago. From 1974 to 1977 I was President of Aircraft Operations for Rockwell, which had nothing to do with space. Since 1984, I have consulted with Rockwell occasionally, as I have for many other aerospace companies. I have no Rockwell financial holding, but I do have a retirement plan and medical plan which is fully funded. My employment experience has been reviewed with the office of Government ethics. That office, the NASA General Counsel and I feel that there would be no reason for me to limit the breath of my management responsibilities. I therefore would intend to participate in procurement evaluations, program reviews, etc. as necessary to fulfill my duties as Deputy Administrator.

POSTHEARING QUESTIONS OF SENATOR RIEGLE AND THE ANSWERS

Question 1. You will assume your responsibilities within NASA at one of the most critical junctures in the history of the Space program.

Would you please tell the Committee what, in your opinion, are the primary challenges that confront NASA in the aftermath of the Challenger tragedy?

Does NASA have the necessary resources and the right polices in place to get the space program back on track?

Answer 1. The primary challenges which confront NASA in the aftermath of the challenger tragedy are to:

1. Resume shuttle flights as safety and as soon as possible.
2. Help Dr. Fletcher establish long range goals for the civil space program.
3. Start development of the Space Station.
4. Start production of a replacement orbiter.
5. Revitalize the NASA spirit.

Dr. Fletcher has already brought many top people into the NASA management team. I will work with Dr. Fletcher on the policies, management procedures and definition of resources which are needed to get the civil space program back on track.

Question 2. What will be your primary responsibility within NASA? What is your preliminary opinion of the agency's large-scale programs—the shuttle and the space station? What preliminary suggestions or recommendations do you have to get these programs on track?

Answer 2. I will be in charge of NASA-wide operations, including Space Transportation, Space Science, and Aeronautics and Space Technology. I will deal with the institutional well being and assure that elements are updated where necessary. I will be the Chief Operating Officer.

I believe the Shuttle and station are necessary building blocks to regain our preeminance in space—whether we follow the goals of the Paine Commission, or a lesser intermmediate goal.

Actions are under way with changes in management, upgrading of communication, and clearer definition of responsibilitty and accountability. NASA's role as a longtime operator of space programs needs to be addressed and our organization adjusted as required.

Question 3. There has been much discussion in the aftermath of the Challenger tragedy concerning the need for more centralized management within NASA. As a matter of fact, this was one of the major recommendations General Phillips made concerning the structure of the Space Station.

However, a 1977 article by Robert Seamans and Frederick Ordway titled "Lessons of Apollo for Large-Scale Technology" argues that "decentralization" is a critical ingredient in decision making and project execution. To quote from the article, "no single individuals or even small groups of individuals can possibly cope with all relevant facts and issues."

In your opinion, should major programs like the Space Station be "decentralized" or centralized?" And, is NASA Headquarters in 1986 capable of managing a large scale project, or should some of the Associate Administrators and the management responsibilities be located at NASA Centers?

Answer 3. I agree with General Phillips and Jim Fletcher that the Space Station should be run out of Washington, because of the broad base of centers, contractors and universities involved, and its ultimate relationship with international participants. NASA is not strong enough in Headquarters, and for that reason, a small system engineering contractor will be brought in to support the Headquarters Program Director, and much of the detailed integration work will be done by the centers and their contractors.

This is essentially the Apollo system, and Dr. Seaman's concerns will be satisfied as they were then. The checks and balances will come from Safety Reliability and Quality Assurance, and through the Center Directors, as it did in Appollo.

Question 4. You are no newcomer to NASA. As a matter of fact, you were intimately involved with NASA's greatest success—Apollo.

What can this Committee and the Agency do to attract new blood—both at the lower levels of the agency and at the mid-level/manager leevels? Why has NASA been unable to attract the best and the brightest young engineers and scientists? What actions can we take to attract these individuals and to ensure the future leadership of the United States in space?

Answer 4. The best way for NASA to attract new blood is to have an interesting, exciting, professionally fulfilling program with modern laboratories, equipment and facilities. Specific actions Congress could take to help NASA attract top quality people would be to support the development of the Space Station and other long range goals. This would give stability to NASA and would add a needed sparkle to NASA. You could also help NASA by encouraging personnel policies that would attract good industry people and university people and trave/relocation policies which would allow NASA to move people form one location to another without these employees suffering undue financial hardship.

Question 5. Your biography indicates that you have been the Vice President of Rockwell International and the President of North America Aircraft Operations.

In light of this fact, do you feel you should recuse yourself from the space station source selection process since Rockwell and Rocketdyne are competing for two different work packages?

Did you discuss this matter with the Office of Government Ethics, and what was their position?

Answer 5. No I don't feel I need to rescuse myself from activities concerning Rockwell as I haven't worked for the Rockwell space activities for 15 years. Rockwell was a client in my consulting business, but so were many other Aerospace Companies. I no longer have any financial interests in Rockwell; except for a retirement and medical plan with Rockwell, which is fully funded. I have discussed these matters with the Office of Government Ethics and the NASA Office of General Counsel neither of which sees any problems.

DANIEL BRENNER TO BE A MEMBER OF THE BOARD OF DIRECTORS, CORPORATION FOR PUBLIC BROADCASTING

THURSDAY, OCTOBER 2, 1986

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 9:00 a.m., in room SR-253, Russell Senate Office Building, Hon. Barry Goldwater presiding.

Staff members assigned to this hearing: Mackey Ayers, professional staff member; Dan Phythyon, staff counsel; and Tom Cohen, minority staff counsel.

OPENING STATEMENT BY SENATOR GOLDWATER

Senator GOLDWATER. I want to apologize to our witness this morning for totally inadequate attendance. But we are in the closing days of this Congress. And we have a continuing resolution on the floor; sanctions on South Africa; and God knows what else.

So it's difficult to expect even two or three people to show. It's no reflection at all on the qualifications or the character of our appointee.

We're going to proceed, and we'll try to take care of it in some way, some fashion. But I do want you to know that I apologize for the lack of attendance.

Welcome to the Commerce Committee hearing on the nomination of Daniel Brenner to the Board of Directors of the Corporation for Public Broadcasting.

Mr. Brenner, a Democrat from the District of Columbia, appears to be a well qualified person for this position. He presently is a law professor at the UCLA Law School, and is head of that school's communication programs.

Previously, he has served as a legal adviser to the past two chairmen of the Federal Communications Commission, and has served as vice-chairman of the U.S. delegation to the 1984 High Frequency World Administrative Radio Conference in Geneva.

And this hearing is being held over the objection of at least some of the Democrats of this Committee. On September 17, we held a hearing on two Republican nominees to the CPB Board.

At that hearing, Senator Long raised the legitimate and proper question, and objection, that the Democrats were entitled to some assurance that a Democratic nominee would be named by the White House and considered by the committee.

I agreed with Senator Long, and assured him that I would not seek to have the Republican nominees reported by the Committee without a Democratic nominee. I urged the White House to get a qualified nominee up here quickly, and they have done so.

I see no reason now why the Democrats should be unwilling to procede with this hearing, evaluate the nominee, and have the committee vote on all three nominations. I intend to do all I can to move these nominations forward.

And with that, Mr. Brenner, I'd ask you to take the stand. I believe a statement is forthcoming from Senator Cranston, a statement from Senator Cranston introducing you. And it will be made a part of the record.

[The statement follows:]

STATEMENT OF HON. ALAN CRANSTON, U.S. SENATOR FROM CALIFORNIA

I am pleased to recommend to the Committee Daniel L. Brenner, a native son of California to be a director of the Corporation for Public Broadcasting.

Mr. Brenner is a Democrat nominated by President Reagan to serve as director of the Corporation for Public Broadcasting, a nomination which I proudly and wholeheartedly endorse. Mr. Brenner is an extraordinarily gifted young man who has devoted his talents to the field of communications, and has amassed a unique broadcasting and communications expertise that makes him eminently qualified to serve on the Board of the Corporation for Public Broadcasting.

Mr. Brenner has served as legal advisor to two FCC Chairman. In 1979, following a clerkship with a federal district court judge and a tour of duty with a distinguished Washington law firm, he joined the FCC as legal advisor to Chairman Charles Ferris. When Mark Fowler was appointed FCC Chairman, Mr. Brenner became his senior legal advisor, a position he held until this past summer. In his role as advisor to two FCC Chairmen, Mr. Brenner has played an integral and indispensable role in the FCC's reshaping of broadcast policy and regulation. Among his other notable accomplishments, Mr. Brenner has served as Vice Chairman of the U.S. Delegation to the 1984 High Frequency World Administrative Radio Conference in Geneva, taught at Stanford University and a number of law schools, hosted classic cinema programs and entertained in comedy clubs.

Mr. Brenner is prolific author and has published two books addressing important mass media and broadcast issues as well as numerous articles on a broad range of communications issues. He currently serves as the Director of Communications Law Program at the UCLA School of Law.

Mr. Brenner's background and experience evince not only a familiarity the Corporation of Public Broadcasting, but stand witness to his strong personal concern with welfare of telecommunications in America. Mr. Brenner's outstanding credentials make him a superb candidate to serve on the Board and his appointment promises a unique and vital contribution to the work of the Corporation for Public Broadcasting.

Senator GOLDWATER. Welcome, Mr. Brenner, it's nice to have you here, particularly being from UCLA, which is out in my neck of the woods, and a college that my sister graduated from many, many long years ago. She would love that.

You have a statement, Mr. Brenner. You may make it or insert it, either way you like.

[The biographical sketch follows:]

BIOGRAPHICAL SKETCH OF DANIEL BRENNER

Address: 434 S. Rodeo Dr., Beverly Hills, UCLA School of Law, Los Angeles, CA 90024.

Business: California 90212.

Position to which nominated: Corporation for Public Broadcasting Board of Directors.

Date of birth: May 25, 1951. Place of birth: Los Angeles, CA.

Marital status: Single.

Education: Institution, Dates attended, Degrees received, diploma; Dates of degrees: Beverly Hills H.S., 6/65–6/69, diploma; Dartmouth College, 9–69–12/70; Stanford University, 1/71–6/76, B.A., M.A., 1973, J.D., 1976.

6/73–9/73: USLife Savings, Los Angeles, CA, marketing ass't.
6/74–9/74: USLife Savings, Los Angeles, CA, law clerk.
6/75–8/75: Westinghouse Elec., Pittsburgh, PA, law clerk.
6/76–9/76: Stanford Univ., Stanford, CA, lecturer.
10/76–9/77: U.S. Courts, Hon. Matt Byrne, Los Angeles, law clerk.
12/77–9/79: Wilmer, Cutler & Pickering, Washington, DC, attorney.
9/79–7/86: Federal Communications Cmm'n, Washington, DC, attorney.
9/80–12/80: American University, Washington, DC, law lecturer.
1/83–12/83: Cardozo Law School, New York, NY, law lecturer.
9/83–12/83: G.W. University, Washington, DC, poli sci lecturer.
9/79–7/86: Comedy clubs on East Coast, performer.
1/86–7/86: Media Law School, Los Angeles, CA., law professor.
7/86–current: U.C.L.A. Law School, Los Angeles, CA., law professor.

Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions: Senior Advisor and Legal Advisor to the Chairman, Federal Communications Commission, 1979–1986; Vice-Chairman, U.S. Delegation, Int'l Telecommunications Union High Frequency World Administrative Radio Conference, Geneva, Switzerland, 1984.

STATEMENT OF DANIEL BRENNER

Mr. BRENNER. Thank you. Good morning, Mr. Chairman.

I would like to thank President Reagan for nominating me to the Board of Directors of the Corporation for Public Broadcasting.

I would also like to thank the members of the subcommittee and your staff for their assistance in arranging this hearing on an expedited basis.

My presence here today is evidence of my willingness and interest in serving on this Board.

It evidences, too, a series of contributions by others that has led to this day. If I may, I would like to thank my mother and father, Dorothy and John, who make contributing to community affairs a worthwhile pursuit in the Brenner household; my brothers, Rob and Jim, who by their example encouraged an interest in public affairs; and my friends and teachers, who taught me about my responsibility to my country, in particular, Rabbi Emeritus Albert Lewis of Temple Isaiah in Los Angeles; the late Allard Lowenstein; and Professors William Rivers and Jules Dundee of Stanford University.

I would also iike to thank my previous two bosses, Federal Communications Commission Chairmen Mark Fowler and Charles Ferris—Charles Ferris who invited me to join his staff as legal adviser, and Mark Fowler, who continued to harness my energies to some of the great policy questions confronting the FCC.

If I am confirmed, I will do my utmost to make the CPB Board of Directors a productive, working body, and to carry out the mandate established for public radio and television by Congress in the Public Broadcasting Act.

The goal of public broadcasting must be forward minded, to renew what is soundest in our American culture, and to underwrite what is untested and perhaps controversial, but worth a careful look.

I believe in our free market system generally, and particularly, where matters of expression are involved. But its dizzy pace to give Americans what it thinks we want on television and radio, our

commercial broadcasting system sometimes neglects what we may need as a society.

In the 1960s, as the number of television outlets grew, Congress wisely provided for a system of funding that would pay attention to those concerns that commercial broadcasting could not or would not address.

Well, the broadcasting world has changed a great deal since the charter of the CPB was handed down. There are more broadcast outlets, commercial and noncommercial, and many nonbroadcast sources of programming, too.

But I believe that Congress' mandate for a noncommercial broadcast system remains a powerful ballast to our commercial system.

I'm not alone. So do the thousands of subscribers in hundreds of communities who are members of their local public stations. And so do the millions of Americans who, each week, turn to our public system for everything from symphonies to spelling lessons, from Mark Russell to Bertrand Russell.

As a board member I intend to respond faithfully to the mandate set forth by Congress for this Board. I hope that my service will justify the confidence placed in me by President Reagan and by the Senate.

In the end, we Americans define ourselves by our cultural commitments. By other nations, we are measured by them. And by history, we're marked by them.

My hope is that I will contribute to keeping our system of public broadcasting a source of pride and an insignia of cultural honor.

Thank you again, Mr. Chairman, for the privilege of appearing before your committee today.

Senator GOLDWATER. Thank you very much, Mr. Brenner, for your statement.

I'm particularly impressed with your very obvious feeling that public broadcasting has a role to play in America, and should play it in the proper way.

I am firmly convinced that if we allow public broadcasting to wander off by itself and present programs that are not indicative of the best interests of America, it is going to wind up in the same boat that the general broadcasting is, and that is not very good.

I look to public broadcasting as sort of the bellwether. It should become the leader in the return to sanity of our overcrowded television stations, where all we see are beer commercials, brassiere commercials, and God knows what else, and see very little of anything of interest to the American people.

I'd like to ask you a few questions. Could you explain your role in the Burbank Broadcasters, KROQ case before the Federal Communications Commission?

Mr. BRENNER. Briefly, I was recused in the matter because of my personal knowledge of one of the parties in the case.

And if I may, Mr. Chairman, I'll submit a complete statement to you as to how my recusal took effect, and the dates involved.

Senator GOLDWATER. If you'd care to put something down in writing, what we'd like is just an opportunity to document that you recused yourself from consideration of the case. Just a paragraph or two, so we can make it a part of the record.

Mr. BRENNER. That's exactly what I did. I'll be glad to furnish it in writing.

[The following information was subsequently received for the record:]

This case, which involved competing applications and the renewal application for KROQ and KROQ-FM, Los Angeles, began in the early 1970s, well before my arrival at the FCC In 1979. As a Commission employee, I was involved in no aspect of this case directly or indirectly. My reason for noninvolvement was my personal knowledge of Kenneth Roberts, who was a party in the case.

I met Mr. Roberts while the case was in an adjudicatory posture before the Review Board of the Commission in 1982, and not before the Commission as a deciding body. During our meetings, Mr. Roberts raised the possibility of my going to work for him. I declined to discuss it with him while the case was before the FCC. But in light of his raising the issue, I filed a letter of recusal with Chairman Mark Fowler and the Deptuy general counsel Lauren Belvin on February 23, 1984, indicating that I would not participate in any phase of the case as his legal advisors. This letter formalized my earlier recusal, based on having met Mr. Roberts, which I had expressed orally to the Chairman and members of the Chairman's staff.

At no time before or after my formal recusal did I advise Chairman Fowler, any other Commissioner, or any other Commission employee in the matter. Nor did I provide anyone, including Mr. Roberts, with any information relating to internal Commission material regarding the case. As it turned out, I chose not to pursue the employment possbility with Mr. Roberts and remained at the Commission.

At no time was I involved in advising Chairman Fowler or anyone else at the Commission concerning the proposed settlement agreement. Robert Petit, legal advisor to Commissioner Dawson, was the chairman's advisor due to my recusal and the recusal of the other legal assistant in our office, whose former law firm had represented a party in the case. The Commission, following a period for public comment, approved the settlement agreement on August 1, 1984, granting the license for KROQ-FM to Mandeville Broadcasting, Mr. Robert's company.

In April, 1986, Mr. Roberts filed an application to transfer the KROQ-FM license to Infinity Bradcasting. In May, 1986, I filed a delcaration with Mandeville Broadcasting's opposition to a petition to deny, filed by Tony Lazzerino, a former employee of Mr. Roberts. My declaration was filed at the request of Mr. Robert's attorney, detailing the timing and nature of my recusal. I also filed a further recusal to preculude advising Chairman Fowler regarding the transfer to Infinity.

In sum, I was never involved in any aspect of the Commission's handling of the case. And in the end, the only action that the Commission took was to approve a settlement agreement, which had been subject to public comment and which all parties to the case had requested.

Senator GOLDWATER. What do you envision your role to be as a CPB Board Member, and what contributions, for example, if any, do you feel that you can make?

Mr. BRENNER. The CPB Board is a collegial board, or should be. And I have had experience for the last four years on the Board of Trustees of Stanford University on which we've had to wrestle with many controversial issues that confront large private universities, not the least of which, for example, is what to do about the stock portfolio the University holds in companies that do business with South Africa, which is a very contentious issue among the Board of Trustees.

And this is an area where I've worked very hard to try to make the debate an intelligent one, and where the parties on the Board disagree but don't become disagreeable.

I think in that sense, a spirit of collegiality and trying to move a board forward, rather than just bickering, is a positive contribution I can make.

In addition, up until my current position at UCLA, I served for about seven years with the Federal Communications Commission, and I'm quite familiar with Federal communications policy.

I think in that area, a knowledge of the Communications Act, and how it relates to the noncommercial broadcaster, could be helpful.

And finally, my own background as a parttime performer and writer may inject a certain amount of awareness as to the creative potential of the broadcast medium.

My interest in television is a longstanding one, as a viewer and as one who studies the medium as a cultural art form. And I would hope that my views on that would be helpful in board meetings, too.

Senator GOLDWATER. I think that statement would indicate that you feel board members should have a say or play a part in the programming for public broadcasting.

Do you agree with that?

Mr. BRENNER. Well, as I see the board's mandate, it's to act as a heat shield for the broadcaster from the political considerations that often confront, or sometimes impinge, on public broadcast funding.

The act requires the board to insure that objectivity occurs, particularly on programs of a controversial nature.

So I think that is a function we can properly exercise, as long as we ourselves don't become involved in making political judgments—in particular, preventing others from making political judgments about the programming.

Now that—it's almost a conundrum, because you want to have a system that's responsive to the people who are paying for it, the American taxpayers through their elected representatives. But you don't want a system that becomes subject to the varying political sways in the country.

So walking that fine line is part of the challenge of being a board member; to prevent CPB from becoming a politicized funding agency I think is important.

At the same time, you want to ensure that if you spend money, you know where the money is going. And you want to be able to tell the people who are authorizing the money to be spent, just how it's been spent.

Senator GOLDWATER. I like what you said on that. I have a tremendous interest in public broadcasting, and I must say, a great respect for the majority of the stations.

But we have a few, particularly among the bigger ones, which seem to have an intent to make a political organ out of public broadcasting. And I would hope that you and the other members of the Board, including the Chairwoman, will get into these decisions that they seem to have been making about the presentation of programs.

I don't mind a controversial program being presented as long as the opposite side has a chance to answer back.

So I would hope that you would pay close attention to that. We have been trying our best, as a committee, to get into the facts of my statement. Are they becoming political, or are they not?

We have had a lot of correspondence complaining about some of the programs that some of these stations have been producing.

I again express my regret that more people are not here, because I know they'd like to ask questions. But they're not here, and I

don't know how the hell I can run on here for a couple of hours without repeating myself.

So congratulations.

Mr. BRENNER. Thank you, Mr. Chairman.

Senator GOLDWATER. Thank you for your willingness to serve. This is a real demonstration of a citizen's responsibility to his country, the willingness to give up his private life in order to help.

So with all of that, the meeting will be adjourned.

[Whereupon, at 9:15 a.m., the subcommittee adjourned.]

[The following information was subsequently received for the record:]

QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS

Question. A primary reason for the existence of CPB is to help insulate public broadcasters from political pressures. The leaders in implementing this policy are the Members of the CPB Board. What do you think about this policy, and how should it be implemented? Should CPB Board Members be concerned with programming shown by public broadcasting stations? Should they be involved with the decision to air a certain program?

Answer. I agree with this policy. It reflects the need for a "heat shield" for public broadcasters from demands that inevitably result when public funding is provided by elected officials. That insulating function is the role of the Board of Directors and is expressed by Section 396(g)(1)(D) of the Act, which instructs CPB to carry out its activities so as to "assure the maximum freedom of the public telecommunications entities and systems from interference with, or control of, program content or other activities."

At the same time, the Congress expects that the programming carried out under CPB funding will be objective overall. Thus, Section 396(g)(1)(A) provides that the programs funded under the Act will be made "with strict adherence to objectivity and balance in all programs or series of programs of a controversial nature".

The Board cannot, in fact, control what programs are ultimately "shown" by stations. Each station itself must decide on the mix of programing it will carry. But the Board can be properly concerned that program funding is carried out in such a way so that, overall, a wide spectrum of viewpoints on controversial issues is made available. Thus, I do not believe a Board member can be involved with the decision to "air" a certain program, nor should he decide whether to fund the production of a particular episode of a program. Rather, the concern is to insure that taken as a whole, program series devoted to coverage of controversial issues include a broad spectrum of viewpoints. The public will have confidence in the public broadcast system if it feels that there is balance present overall.

Question. Throughout its history, public broadcasting has had to rely heavily on foundation and corporation sponsorship, as well as on funds provided by government. As the channel through which federal government support for public broadcasting runs, the Corporation for Public Broadcasting is in a critical position to advocate the financial needs of all public stations.

It has been the view of this Administration—and several previous Administrations as well—that funding for CPB should be cut. Although this Administration proposed to cut CPB funding in half, Congress has not gone along. As a nominee to the Board of CPB, what role would you play, and what commitment would you make to protect and advocate the budget of CPB within this Administration and successive Administrations?

Answer. I believe in federal funding for CPB and at such levels that make the service a viable source of quality programing. I would like to see alternative sources of funding, but until such alternatives are in place, I do not believe that severe cuts in federal CPB funding are the right course.

Of course, there is bound to be a gap between needs and wants, but I think the case for public television is a good one and needs to be articulated better. I would make a commitment to try to articulate that case as a member of the Board to members of Congress and to members of the Administration.

Question. The Office of Management and Budget has suggested that federal funding for public broadcasting be phased-out by 1992. What is your view of their proposal?

Answer. I do not believe that federal funding should be phased out by 1992 unless there are in place revenue generating mechanisms to replace federal dollars.

Question. To the extent that decreased federal funding would require increased corporate underwriting or foundation support, in specific terms, what additional safeguards would be necessary, if any, to assure that programming and programming content would not be adversely affected?

Answer. I believe that the public broadcasting programs funded in part or in whole by corporate underwriting or foundation support should maintain a "no strings attached" rule, as to that support. Similarly, programs that receive partial CPB funding support in combination with such support must be subject to the same guideline. Even today, the potential exists for the supplying of programs to stations by entities with a private agenda in mind. If federal funding decreases, the need for enforcement of this rule increases. At the same time, whether or not there is declining federal support, there is nothing wrong with program producers trying better to match interests—not political viewpoints or private agendas—of corporations and foundations interested in funding public broadcasting programs.

Question. Congress has itself expressed great concern about meddling with program content. In fact, that concern led the CPB Board to establish an independent program fund to make program decisions. In light of any concerns that you might have about protections regarding program sponsors, how do you think this independent program fund is working—do you think that the CPB Board should play a greater role in programming decisions?

Answer. I expressed some of my views on Board involvement in programming decisions earlier. Generally, I feel that the Board can be involved in setting program category priorities. For instance, I believe public broadcasting has a role to play in providing childrens educational and instructional programming, long-form news and news documentary programs, long-form radio news broadcasts, and dramatic works by authors new to television. These are program areas for which commercial broadcasting generally cannot or will not provide adequate coverage.

Beyond agenda setting of this sort, I do not believe that CPB should be involved in programming decisions, particular as regards individual episodes of programs. As I am new to public broadcasting, I will defer comment on how well the independence program fund is working.

Question. Whether or not you support decreased federal government support for public broadcasting, assuming such decreases were to occur, what specific suggestions would you make to maintain support?

Answer. I have elswhere advocated a markplace approach to broacast regulations of commercial stations for a number of reasons, not the least of which is my view of the place of broadcast speech under the First Amendment. One way to deal with the windfall of essentially permanent license exclusivities granted to commercial stations under a market system is to impose a fee, based on a small percentage of gross revenues, on those who would continue to hold license exclusivities. This fee could then be used to support public broadcasting. This is consistent with the goal for a noncommercial service of addressing those program services that we as a nation desire from over-the-air broadcasting but which are not provided under a market system. The fee is not a quid pro quo for deregulation, which I believe is justified on its own merits. But it does replace the current system of content-based licensing with one that recognizes the value of the exclusivity granted by the government and seeks to recoup some of its value.

Quesstion. In recent years, and with considerable debate, public TV has moved to expand advertising through extended statements by corporate underwriters. Some think that advertising should be expanded even more and possibly replace all federal funding. What is your view on this matter?

Answer. I would likely favor allowing the use of straight-forward advertising, rather than enhanced underwriting, to supplement federal funding. At this time I do not believe such underwriting/advertising can cover the entire federal commitment to public broadcasting. Nor should it. Some programs (for example, childrens instructional programming and controversial public affairs programs) may be unable to attract advertiser support, and the agenda of public broadcasting should not be set only by those who underwrite or advertise.

Question. Regardless of your personal view on this matter, assuming that further reliance on advertising for funds become a reality, do you think specific guidelines or limitations are necessary to insulate public television from the excesses of commercial televisions? What would you suggest?

Answer. I believe that guidelines should be developed by the stations themselves. Of course, stations will be able to work together, through NAPTS and PBS, to develop consistent guidelines for national advertising. My own hope is that advertising on public television could continue to be clustered and approved for carriage only if

consistent with the ambiance of the program in question. I would try to advocate that view, where and if appropriate.

Question. On commercial television, corporate sponsorship is affected by ratings but also to some degree on the message and content of the programming. Do you think that expanded advertising would cause public broadcasting to further lessen programming that might go in to controversial public affairs topics such as a result?

Answer. I share the concern implied in this question. For that reason, I favor continued, nonadvertiser-based funding, of public broadcasting. Such funding would be particularly crucial to the production of controversial public affairs programs.

Question. Television as a medium has matured dramatically since its beginning. At the time the whole business got going, Congress acted to guarantee that there would be a balance of commercial and public VHF stations.

Recently, some have proposed that the FCC should allow so-called station swaps, so that commercial UHF owners could swap with public VHF stations. Advocates of this position point out that the money generated by such a swap could provide a substantial endowment of funds for some stations. Opponents argue that this would be akin to selling-off the national parks.

a. What is your view of the station swap issue, and as a CPB Board member what position would you argue before the FCC?

b. With regard to the various funding problems that might be faced by public television—federal budget cuts or a phase-out of federal funding or reliance on expanded advertising to make budget shortfalls—would you advocate station swaps in any of these circumstances as a method to maintain funding for public stations?

Answer. I do not favor swaps as a general method of funding public broadcasting. I do, however, believe that there may be circumstances in the future where, for instance, by the availability of cable carriage of UHF stations in a saturated market, a swap might be in the best interest of the local viewing audience and the public television station. I believe that stations should be allowed to consider swaps, but that such swaps be reviewed by the Federal Communications Commission to assure that coverage by the public station is not substantially impaired as a result.

Question. Regardless of whether you might advocate station swaps as a way to generate funds for some stations, what do you think would be the impact on public television throughout the country? Wouldn't this help just a few stations and leave the rest to starve?

Answer. Because individual stations are often the primary producers of public broadcast programming supplied throughout the public broadcasting family, an increase in the strength at one station does not necessarily harm others. As it were, increasing the water level causes all the boats to rise. A new program production outlet caused by a swap could, thereby, make the overall system stronger.

Question. Concern about the availability and source of funding for public broadcasting is often expressed in terms of how increased reliance on corporate underwriting might affect the choice and content of programming. Likewise, the intent behind the formation of CPB in 1967 was to provide a buffer from the political process that provides public broadcasting with its response to this question.

a. What is your opinion of the proper role for a CPB board member to play in ensuring the independence of CPB from political influence and control? How does this compare with your view of how a CPB Board member should insulate public broadcasting from the interest of corporate underwriters?

Answer. There is no way to insure that political influence will be absent from CPB. Members of Congress vote on the CPB appropriation bill and the President can sign it or veto it. The best I can do as a board member is to try to insist that those who vote on CPB appropriations act with fidelity to the 1967 Act's purpose: to remove political considerations from public broadcasting in order to insure that the best programming is brought forth to the American people. As an individual member, I will need to assert the very independence expected of me and to act without expectation that something awaits me if I act in one way or another.

As to corporate underwriters, I think we can insist on a no strings attached policy. Those who would condition support based on a right to influence the political or editorial content of a program will learn that, as far as this member of the CPB Board is concerned, there is no retreating from a no-strings policy.

Comparing the influence of political rather than corporate influence, I think it fair to say that it is harder for the Board to insulate itself from the former. How taxpayer money is spent is surely a proper role of Congress and the President. But so long as the CPB is faithful to its charter and maintains a public perception that it is a source of fairmindedness in its granting of program funds, those who might try to influence CPB decision-making on a political basis will find their misguided efforts unavailing. My experience at the FCC suggests that independent agencies

can indeed run independent of political pressures. While the tendency to try to influence is strong among some politicians, the fact is that the 1967 Act calls upon CPB to be politically neutral. Those who would thwart that neutrality run the risk of being viewed as circumventing the Act, considerably thereby weakening the strength of their attack.

68-626 (96)